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This is the Journal of the Oklahoma State Medical Association, and every member is entitled to a copy every month; and if any member does not receive his Journal promptly, the matter should be reported to this office. Communications of all kinds should be addressed to the Editor.

OUR NEXT ANNUAL MEETING.

Our next meeting will be held in Oklahoma City on May 11, 12 and 13. The meeting on the 11th will be of the house of delegates and council and will be in the evening.

We would suggest to those preparing papers to remember that twenty minutes is the limit on all papers except the President's address. Make your papers short and to the point, without too much text book material.

Begin to get ready for the meeting now as we expect the best meeting ever held in the history of the Association.

WHAT WAS DONE WITH IT?

In Bunn's Constitution of Oklahoma, we find the following:

ARTICLE V., Section 39.

The legislature shall create a Board of Health, Board of Dentistry, Board of Pharmacy and a Pure Food Commission, and prescribe the duties of each. All physicians, dentists and pharmacist now legally registered and practicing in Oklahoma and Indian Territory shall be eligible to registration in the State of Oklahoma without examination or cost.

Schedule following Article XXIV, Section 1. No existing rights, suits, proceedings, contracts or claims shall be affected by the change in the form of government, but all shall continue as if no change in the form of government had taken place.

Schedule following Article XXIV, Section 2. All laws in force in the Territory of Oklahoma at the time of the admission of the State into the Union,

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which are not repugnant to the Constitution, and which are not locally inapplicable, shall be extended to and remain in force in the State of Oklahoma until they expire by their own limitation or are altered or repealed by law.

By the above quotations we readily see that there was no necessity for any haste in re-registration of physicians in the new state of Oklahoma, as the same laws under which we had lived very comfortably for several years were extended over the new state and would remain in force until the legislature should change or repeal them. However, very soon after the proclamation was issued admitting Oklahoma to Statehood, the Governor appointed a new Board of Health to succeed the old Territorial Board, which was proper, as the old rule, "To the victors belong the spoils," is still in force in medical matters as well as in political matters, a condition of things which all reputable members of our profession deplore.

The members of this new Board were Drs. J. C. Mahr, Shawnee, Secretary, and W. T. Tilly, then of Pryor Creek, but since moved to Muskogee, and A. E. Davenport of Tishomingo, but since moved to Oklahoma City.

All of these gentlemen were members of the State Medical Association, and of course it was expected that they would have the good of the profession at heart, putting all selfish interests in the background. Soon after the appointment of the new Board a meeting of the members thereof, together with several other physicians, was held in Guthrie, and matters of legislation were discussed, along with the question of re-registration. It was agreed that a new medical law should be asked for as soon as a measure could be prepared, and the Committee on Medical Legislation set about to get up such a law, and it was supposed that the matter of re-registration would be deferred until the legislature should pass a new law and give the Board of Health more powers than it possessed under the old Territorial law, so that when the re-registration began, there could be a lot of weeding out done. That the old law conferred no such power on the Board was demonstrated when the Board of Health attempted to revoke the certificates of those who had been registered on the "Armstrong Mill Diplomas."

The law prepared by the different Committees of the various State Medical Associations, gave the Board of Health the power of looking into these matters, and if in their judgment any one had been illegally registered it had the power to refuse to re-register such parties.

However, the new Board would not wait, as the following letter under date of Dec. 30, '07, will show:

Dear Doctor:—

In a recent order made by the State Board of Health itbecomes necessary that all those who want to continue the practice of medicine in the State of Oklahoma must re-register. In support of this order we have had an opinion from Attorney General West which makes it mandatory.

This has become necessary because of the great many illegal registrations, and the only manner in which the Board can ascertain those who are legally authorized to practice, is by having all the doctors in the state re-register.

That the expense of re-registering may be as light as possible they have concluded that this work shall bedone through their seventy-five representatives in the State, the County Superintendents of Health; otherwise the state would have been necessarily divided into districts and each doctor have gone to a certain place individually to register.

The fee for re-registering is $2.50, which amount is about as reasonable as is consistent with the expense entailed.

In compliance with this order I herein enclose an application for you to sign and send to the State Superintendent of Health, Dr. J. C. Mahr, Shawnee, Oklahoma. You will also enclose your old certificate.

The time within which this registration must be done expires January 27th, 1908, and all who have not re-registered on or before that date will be considered as practicing illegally, and steps will then be taken by the State Board of Health to force registration of all who have not complied with this order on or before that date.

I will further state that the qualification necessary is that one was actively engaged in

the practice of medicine in Oklahoma on November 27th, 1907.

Hoping that you will comply with this order immediately, I remain,

Yours fraternally,

Superintendent of Health, Logan Co."

Admitting that it might become necessary for all to re-register, certainly, according to the Constitution, see above, Schedule following Article XXIV, Sections 1 and 2, it could not be until the legislature should change or repeal the old Territorial law. But the above letter says that it has become necessary because of the great many illegal *registrations.*

Now, why was it so important just now when we had been getting along very nicely for several years, under existing conditions. And again, how was the Board going to get rid of the illegal registrations when there was no law giving them any power to investigate the legality of any registration?

This letter also speaks of the expense of re-registration.

As the Constitution provided that there should be no expense to the physicians for re-registration, and that all should be re-registered, it necessarily follows that the legislature would make some arrangements of the payment of these expenses—if the Board could wait until some medical law could be passed. This letter also says that "the fee for re-registering is $2. 50 when the Constitution says that there shall be no cost.

It also says that, "The time within which this registration *must* be done expires January 27th, 1908."

Regarding the time of re-registration, the Attorney General stated to the writer and another physician, in the Attorney General's office, that, he had never authorized the Board to fix any limit on the time for re-registration, and that he had informed the Board that he would not do so.

Believing that the Attorney General would not advise the Board of Health to charge a fee for re-registration in direct violation of the Constitution, a copy of the above letter was sent to the Attorney General asking if his office had made such a ruling; in answer to which the following letter was received:

STATE OF OKLAHOMA
Office of the Attorney General
Guthrie, Okla., Dec. 31, 1907.

Doctor * * * * *

Dear Sir: Your favor of December 30th, enclosing circular letter from * * * Superintendent of Board of Health of Logan County, is received. In Superintendent * * 's letter he states: "The fee for registration is $2.50, which amount is about as reasonable as is consistent with the expense entailed." This statement is not in harmony with the opinion rendered by the Attorney General. He advised them that they had no right to make any charge for re-registering, but that they might charge a nominal fee for issuing a certificate. Of course it is optional with the physicians whether they take this certificate of registration, but we concluded that every physician would want a certificate. Of course if they conclude that they do not want it, then there is no way to compel them to take it and pay the fee prescribed.

Yours truly,
W. C. REEVES,
Assistant Attorney General.

Thus we see that the Board had misrepresented the facts, when it gave out the statement that a fee of $2.50 must accompany the application for re-registration, and that the authority came from the office of the Attorney General.

When the notice from the County Health officer was received your Secretary believed it his duty to inform our members of the facts in the case, and the provisions of the Constitution; accordingly the following circular letter was prepared and the envelopes addressed, to the various members of the State Association, in the hopes that the profession might be saved the several thousand dollars that the Board of Health proposed to take from its members in direct violation of the Constitution.

Guthrie Okla., Jan. 4th, 1908.

Dear Doctor:

Having received many inquiries as to whether the State Board of Health have any authority for requiring th ere-registering of the Physicians at this time, we have taken this method of answering.

As neither the Constitution, or the laws of Oklahoma, under which the Board of Health were appointed and from which it receives all of its powers, gives this right, we necessarily have to conclude that no such right exists.

That the Board have no right to charge a fee for re-registering physicians, is conclusively proven by the Constitution, which reads as follows, see section 39, Art. V.: "All physicians, dentists and pharmacists now legally registered and practicing in Oklahoma and Indian Territory shall be eligible to registration in the state of Oklahoma without examination or cost."

And to back this up we quote from aletter from the Attorney General's office, and signed by one of the assistants.

With reference to the notice sent out by the Board of Health this letter says, "This statement is not in harmony with the opinion rendered by the Attorney General. He advised them that they had no right to make any charge for re-registering, but that they might charge a nominal fee for issuing a certificate.

Of course it is optional with the physicians whether they take this certificate of registration, and if they conclude that they do not want it, then there is no way to compel them to take it and pay the fee prescribed."

In view of the above facts we think it best to keep your money if you have not already sent it, in which case, as it has been sent upon a misrepresentation of the facts, upon your request should in justice be returned.

There is no doubt that the legislature will soon pass a new medical law which will prescribe methods by which all legally registered physicians can properly be registered in the new state.

Fraternally yours,
E. O. BARKER, Sec'y.

However, before we got ready to mail this letter, two members of the Board were in Guthrie, and the matter was taken up and the postponement of the re-registration, until the legislature should make some provisions by which the letter of the Constitution could be carried out, and the Board invested with power to cut out those not entitled to re-registration was strongly urged. These two members stated that the Board had never authorized the statement that the fee of $2.50 was for re-registration, but that it was for the certificate, and that the money was to be used to carry on the litigation that would necessarily result on account of the refusal of the Board to register a lot of fellows who were not entitled to re-registration, and that a strict account would be kept of all the expenditures of the Board, and a statement of the same made, so that every member of the profession might know just where every dollar went.

They also stated that the Board would give the doctor for his $2.50 a "sheep skin" which would satisfy him; instead of which, he got a cheap paper certificate, which a good printing house in this city offered to make for $40.00 per thousand. At this time your Secretary received an emergency call to the office of the Governor, where he was very emphatically informed that, if the State Medical Association persisted in opposing the Board of Health, any medical legislation that might come to him for his approval would "get H--l pounded out of it."

At this meeting an agreement was reached, with the two members of the Board of Health, that a supplementary letter would be sent out by the various county health officers stating that the fee of $2.50 was for a certificate, and that if the physician did not want a certificate that he would be re-registered free, and that the circular letter would be held up.

In the course of a few days, the following supplementary letter was received in this county, but if it was sent out in any other county in the state, we have never seen a copy of the letter:

Guthrie, Okla., January 13, 1908.

Dear Doctor:—

As a supplement to my letter written under date of December 30, relative to registration, I desire to submit the following, which is a copy received from the State Secretary, Dr. J. C. Mahr, written under date of January 11th, 1908:

"For fear some of you have misunderstood, I wish to repeat this much: it is the opinion of the Attorney General that the State Board of Health is the proper body to conduct this re-registration. It is his opinion that we cannot charge any fee for re-registering any one who is legally entitled to be re-registered. Consequently in obedience to that, we will re-regis-

ter anyone who will properly fill out the application blank and furnish the evidence required without charge or cost. We had no funds to conduct this, neither was it probable that we would be successful in securing an appropriation sufficient to meet this expense, so we adopted the plan suggested by the Attorney General, of raising this money by charging a fee for the certificate we would issue. Now the taking out of this certificate is not compulsory, but any one taking this certificate and paying this fee is helping us in the work we are trying to do. My opinion is, not as amember of this Board, but as an individual, that a certificate in time will be required."

This copy from Dr. Mahr's letter of course explains itself, so I presume no further comment for me is necessary.

Yours fraternally,

* * * * * * *

County Superintendent of Health.

The terms of this letter were violated in a number of instances, where applications for registration were sent in without the $2.50, the parties not being registered at all, as was found when the present law went into effect.

We have been informed that about 2200 certificates were issued by the Board of Health, making between five and six thousand dollars taken out of the pockets of the members of the medical profession of this state, in direct violation of the State Constitution. Now what has been done with this? The Secretary of the Board claimed that the weeding out policy was going to be vigorously carried out, and would necessarily result in much litigation, to pay the expenses of which, the fee of $2.50 would be needed. As no litigation has ever been heard of it is presumed that the weeding out process has been limited wholly to weeding the dollars from the pockets of the medical profession.

We are creditably informed that these three men and their friends are laying their plans to capture the State Medical Association at the next annual meeting and it is advised that the county medical societies be careful about the selection of their delegates to that meeting. If there are those who are inclined to think that this matter has any political significance to your Secretary, we would respectfully refer them to the fight we made on the Cowdrick administration several years ago. Our profession is much dearer to us than is our politics, and you may always expect to hear from us whenever we see a medical officer prostituting his office for private greed. If there are those who would criticise, make it direct on your editor, and do not let the State Association suffer for anything he has written.

AMERICAN MEDICAL ASSOCIATION.

Members of the Medical Society of the Missouri Valley and the Medical Association of the Southwest, will be interested in plans that are maturing for a joint excursion train to Atlantic City in June, to attend the annual meeting of the American Medical Association. The special train will start from St. Louis via the Big Four and C. & O. railway, stopping over at Hot Springs, Va., where the delegates will be entertained at luncheon at the famous "Homestead" hotel. Special rates will be in effect, including a boat trip to New York City, and returning either via Niagara Falls or Washington, D. C. By combining the forces of the two societies a special train will be secured, on which no one but doctors and their families will be permitted to ride, thus affording the maximum degree of pleasure and comfort. Members of other medical societies are cordially invited to join the party. Later announcements will be made in this journal.

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Original Articles

DISTURBANCES IN EQUILIBRIUM OF EXTERNAL OCULAR MUSCLES.

(By Edward F. Davis, Oklahoma City.)

In dealing with this question it will be well to first make a brief study of the physiology and physics of these muscles in their individual and combined actions.

The Superior Rectus, beside turning the eye upward, gives two other movements. On account of the insertion being anterior to the vertical axis, there will be a certain amount of adduction of the eye and a rotation of the upper end of this axis inward or intorsion.

The Inferior Rectus has the opposite actions, in that the eye is turned upward and the lower end of the vertical axis is pulled inward, but as the insertion is similar to that of the Superior Rectus, there will be adduction. The actions of these two muscles is increased on adduction.

The Superior Oblique rolls the upper end of the vertical axis inward, depresses the eye and, on account of the insertion being back of the vertical axis, abducts the eye.

The Inferior Oblque raises the eye, pulls the lower end of the vertical axis inward and abducts. The actions of these two muscles is increased on abduction.

The External and Internal Recti turn the eye outward and inward, respectively, and have no other actions.

Thus, in adduction, the External Rectus and the Superior and Inferior Obliques are brought into play; in adduction, the Internal Superior and Inferior Recti. To turn the eye upward, the Superior Rectus and the Inferior Oblique are put in action and to turn it downward, the Inferior Rectus and the Superior Oblique. Intorsion of the upper end of the vertical axis is produced by the Superior Rectus and the Superior Oblique while extorsion is caused by the Inferior Rectus and Inferior Oblique.

These muscles are supplied with the third, four and sixth cranial nerves, having their origins in the floor of the fourth vertricle, beneath the Aqueduct of Sylvius and on each side of the raphe.

The most anterior nucleus is that of the third nerve. It begins as far forward as the posterior end of the third ventricle and extends backward beneath the Aqueduct. It is composed of several partial nuclei which supply the individual muscles of the oculomotor group but just which of these nuclei supply the individual muscles has not yet been satisfactorily determined. It is supposed that the fibres to the orbicularis arise in this nucleus although they become a part of the facial and this accounts for the sursumduction of the eye ball when the lids are closed.

The fourth nerve arises posterior to the nucleus of the third in a chain of cells continuous with those of the third but the fibres have no direct connection with it. They pass upward and backward into the substance of the valve of Vieussens where they decussate with the fibres of their fellows of the opposite side, become a single bundle and appear at the base of the brain at the anterior margin of the Pons. Thus, the right nerve rises from the left nucleus and vice versa.

The sixth nerve arises in the floor of the Fourth Ventricle, considerably posterior to the origin of the fourth and in close proximity to the facial, emerging at the posterior border of the Pons.

These nerves pass forward and through the Sphnoidal Fissure where the third divides into two main branches, the superior of which runs to the Superior Rectus and the Inferior by

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dividing into three branches, supplies the internal and Inferior Recti and the Inferior Oblique. The fourth nerve supplies the Superior Oblique and the Sixth, the External Rectus.

In order to have perfect binocular vision, all these muscles must be in perfect balance and act in harmony and to attain this condition of balance, their various combined actions are under the control of centres of association of a higher order than the nerve nuclei. In this way, it is possible for instance, for one Internal Rectus to act with the External Rectus of the other eye in producing rotation to the side or for both Internal Recti to act together in producing convergence.

ETIOLOGY.—The principal cause of ocular palsies is pressure on the nerve trunks anywhere in their course from the cortex to the termination in the muscles. Causes in the cranium include aneurism, meningitis, periostitis, hemorrhages, tumors, injuries, abscess, embolism, thrombosis and atheroma. Of the orbital causes there are tumors, wounds, cellulitis, etc., together with degeneration of the nerves within the muscles themselves. Frequently some general disease is the cause, Syphilis being the commonest. Of other general diseases, there are tuberculosis, tabes, diphtheria, diabetes, nephritis and some of the rarer central nervous diseases. Toxaemias, such as lead and tobacco poisoning and chronic alcoholism have a place in the etiology. Rheumatism is another important cause and in a sudden and complete paralysis, it is to be suspected. As in many other conditions, hysteria may be the only cause.

SYMPTOMS.—There are six main symptoms: diplopia, false projection, limitation of movement, strabismus, vicarious position of the head and vertigo.

Diplopia, particularly in recent cases, is manifested only when the eyes are brought into such a position that the weak muscle is put in play. So long as the eyes are directed toward an object away from the paralyzed side, vision is single but as this object is moved over past the median line toward the affected side, it first becomes blurred and then double. Diplopia is either homonymous or crossed—homonymous when one or both external recti are involved and crosses when it is the internus that is at fault. This plan applies to the vertical rotators also. In palsies of the superior recti or inferior obliques, the diplopia is homonymous and when those that turn it downward are affected, it is crossed.

Diplopia is a source of the greatest annoyance to the patient, on account of the uncertainty, as to which of the two objects is the true one, and if the paralysis is so slight that the two objects are superimposed on account of the deformity. This finally leads the patient to close the affected eye, thereby saccrificing binocular vision, or else he tilts the head in such a direction that he attains it.

This vicarious position of the head is another of the important symptoms and it is always toward the sound side, opposed to the side of the paralysis and identical with the position of the false image.

False projection is really the cause of the diplopia and, like diplopia, is exaggerated when the affected muscle is brought into use. Suppose the right external rectus to be affected; when the sound eye is fixed on an object, the right turns inward and the image of this object is thrown on the retina of the right eye too far to the left side. It is received at a point upon which, the image of an object some distance to the right, would be received and is located to the right.

Limitation of movement is naturally in the direction of the affected muscle. It increases as the eye is deviated toward the affected side and diminishes when it is rotated toward the sound side. Thus, if the right external rectus were affected and an object were held to the left of the median line, the eyes would be straight, or the deviation would, at least, be comparatively slight, but as the object is moved toward the affected side, and the eyes attempt to follow it, there would be a perceptible lagging behind of the right eye.

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Limitation of movement gives rise to strabismus and as in the case just given, the strabismus is more marked when the eyes are directed toward the affected side, and less so, or absent, when turned away from it. Strabismus and the angle of deviation are of great help in the diagnosis. The angle of the primary deviation, or that angle formed by the lines of fixation of the two eyes when the sound one is the fixing eye, is less than the angle of secondary deviation, or that formed by these lines of fixation, when it is the affected eye that is fixing. This is explained by the fact that the eyes are associated in their innervation and their movements and the surplus of stimulation that is sent to the affected muscle, is sent to the sound one also, and results in a surplus of rotation.

The vicarious position of the head, mentioned above in connection with diplopia, is present in the majority of cases where the paralysis is comparatively recent and the patient has not yet learned to exclude the affected eye. The head is naturally turned toward the affected side in order to obtain binocular vision.

Vertigo is the last of the six main symptoms and in the early stages of the trouble, is most annoying. It disappears on exclusion of the paralyzed eye and to a certain extent, on covering thesound one. The eye properly locates objects so long as it is in such a position that the paralyzed muscle is not brought into use but as the gaze is directed toward the side representing the field of action of the affected muscle, objects are located too far toward that side and appear to fly in the direction in which the eye is moving. This apparent movement of all objects is the cause of the dizziness and is present whenever the patient moves about. It causes an unsteadiness in the gait and a timidity and may be the cause of vomiting.

The symptoms given above will apply to paralysis of all the external eye muscles. Where a single muscle is involved, it is most likely to be the external rectus or the superior oblique on account of their having separate nerve supplies. The number of the muscles affected depends on the location of the causative lesion. For instance a lesion in the floor of the fourth ventricle may be the cause of paralysis of all the eye muscles, while, one in the orbit, may affect only one of the oculo-motor group. Complete motor paralysis gives a characteristis picture. The eyes protrude, stare straight ahead and are fixed. The pupil is dilated, does not react to light and accomodation is lost. This condition is known as total ophthalmoplegia. There may be combined paralyses which affect only associated movements or congugate paralysis. Those muscles most often affected are the lateral rotators. There may be inability to move the eyes to the right or the left or up or down but all other movements are normal. If there is a congugate paralysis to the right, the eyes may be made to follow a moving object so long as it does not go beyond the median line but as soon as it is carried to the right of this line, the eyes remain stationary. In this case, it is not one of paralysis of the right externus and the left internus because convergence is possible and it is caused by a lesion in the association centre.

The onset of ocular palsies may be sudden or insidious but the course is always chronic. In advanced cases, some of the symptoms may be lessened. The diplopia is overcome by the patient closing the affected eye or learning to exclude the impulses received by it. The errors in orientation cease as he learns from experience that the nervous impulses to the peralyzed eye result in a slighter degree of movement than they do in the sound one and he gradually is enabled to form a more accurate judgment of the location of things. The antagonists of the affected muscle may eventually undergo a contracture and in this way, as the case progresses, the strabismus increases.

DIAGNOSIS.—The only condition likely to be confused with paralytic strabismus is squint. In this, the primary and secondary deviation are the same, the

trouble is of long standing and there is usually a marked refractive error.

The identification of the muscle at fault depends to a great extent on the diplopia although in exaggerated cases, the strabismus will be enough to show which muscle is affected. In testing the diplopia, the commonest method is by using the lighted candle. In this method a red glass is placed before the affected eye and in this case then, the false image will be the red one. Another method is by the use of the Maddox rod which is particularly applicable in cases of deviation so mild that there would be fusion otherwise.

When it is borne in mind that the false image is always seen toward the side of the paralysis the identification of the muscle or muscles at fault, will be comparatively easy.

In paralysis of the external rectus, the eye turns inward and the false image is seen too far to the outer side and on the same plane as the true image. When the internus is affected the reverse is the case. Suppose it is the superior rectus. The eye turns downward and outward and the false image is seen above and inward. With the inferior rectus, the eye looks upward and outward and the false image is below and inward. With the superior oblique at fault, the eye is turned upward and outward and the false image is below and out. The Inferior oblique, paralyses gives a downward rotation to the eye and turns it inward and the false image is above and outward. In the case of combined palsies, the muscles at fault can be made out by following this method.

The first aim in the treatment of these conditions is to get at the cause. In cases where there is a history of syphilis or rheumatism it is well to begin treatment for these affections at once and these cases give the best prognosis. For the diplopia and vertigo the affected eye is covered. Prism exercises may be of some use but as th cases that usually come for treatment are advanced ones and a certain amount of contracture has already developed, it is probable that they will be of little use. As the majority of cases are due to syphilis, rheumatism, gout or an auto-intoxication, the sweating treatment is valuable. This is carried out by hot baths and pilocarpine. Electric treatment has some value. The Faradic current is used, the negative being applied directly over the weak muscle through the operator's finger.

Operative measures give the greatest relief in old cases through advancement of the weak muscle or tenotomy of the antagonist or both.

RUSH GRADUATES.

A meeting of Rush graduates is planned for some time during the annual meeting of the State Medical Association. All of those interested, kindly write to Dr. W. G. Little of Okmulgee, or Dr. Arthur W. White, Oklahoma City.

SEND IN YOUR PER CAPITA.

Again we call the attention of the County Secretaries and the members that it is time to send in the percapita if you would get every copy of the Journal. Please attend to the matter at once.

WANTED.

A Doctor who can give good references wants a position as assistant in a Hospital, Sanitarium, Mining or Railroad practice, on a salary.

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SPHENOIL SINUS DISEASES.

BY J. H BARNES, ENID, OKLAHOMA.

Sphenoid sinus disease is of less frequency than disease of the other sinuses of the nose. Some authors say about 5 per cent of the nasal diseases in this country are due to sphenoid trouble. There are many more cases reported now than there were a few years ago. Dr. Andrews of Chicago says he finds sphenoidal diseases very prevalent for he is looking for it.

When we are looking for a thing we are more apt to find it, and then we know better how to find the sinus than we formerly did, and the symptoms are better known. It is like appendicitis was to the surgeon a few years ago; they called it inflammation of the bowels. The Rhinologist called spnenoid disease post nasal catarrh or neuralgia of the head. So the general profession knows it today. You see many cases of post nasal dripping, hawking and spitting of mucous in the early morning, the patient complains of a dull headache that we often call neuralgia. Many of these cases we now know to be sphenoidal diseases.

Those who are treating sinus disease find it more often than is reperted. I think it exists more often than we have any idea of, for reading the literature on this subject we find that the true location of the opening and the proper technique of locating the same is not clear in the minds of some of our writers. Some of them tell us that the sinus is so located that it drains like the frontal sinus. Others says that the sinus cannot be probed successfully during life. Others say that the middle turbinate must be removed in every case before you can locate the sinus with a probe.

I want to show you by these drawings that are taken from the subject and that has been demonstrated many times on the cadaver as well as on the living, being that the outlet is near the top of the sinus just as is the opening of the maxillary sinus and that drainage is always bad if th esinus is badly diseased, which we will take up later. Those who have been looking for these cases will tell you that the sinus can be probed in many cases without even removing the middle turbinate. They will also tell you that the disease is more frequent than the text books would have you believe.

The sphenoid sinus is located in the base of the sphenoid bone, which you will find at the upper posterior part of the nares. One on either side, usually with a bony petition between. The ethmoid bone sometimes forces the anterior wall of the sinus. The sinus may be so large as to extend out in the wings of the spheniod. The opening, the ostium sphenoid allis, is located near the septum upward and backward at an angle of about 45 degrees across the middle part of the middle turbinate to the upper posterior angle of the nares. The sinus is about 1½ cm. deep and about the same across, it being of less oval in shape.

It has three sides for our consideration. The superior or horizontal, just beneath the anterior lobe of the brain where there are some very important structures, the optic nerve and the cavernus sinus.

The external or lateral side is also next to the brain. The internal carotid lies next to this side. The superior and lateral sides are very thin and the adjacent structures make it very dangerous in operating in this region. Empiema of the sphenoid sinus with nicrosis is apt to cause serious trouble. The oblique side or the anterior border which contains the Osteum Sphenoidallis is interesting to us because it contains the opening and is the wall that we take away when we open the sinus.

The sinus is lined with ciliated epitheliam upon a very thin mucous membrane which takes the place of periosteum In the normal state the cipliae will drain the sinus through the normal opening at the top of the sinus, but

*Read before the Oklahoma State Medical Association at Sulphur, May, 1908.

when the sinus becomes filled with some irritating devitalizing pus then we may have a destruction of the ciliae and have a pus cavity formed.

This most frequent cause of this disease is LaGrippe, a severe attack most always involves the sinuses and if the septum is deflected or the middle turbinate prevents good drainage we will have a sinusitis either sub-acute or chronic to follow. Severe colds and the infectious fevers may also be the cause. The sphenoid may become diseased from extension of inflammation from the posterior ethmoid cells, in fact it is seldom diseased alone, when one is diseased the other is more or less affected.

The condition of the nasal passages predispose to sphenoid sinus disease. If the nares are large and the septum straight with no ledges or spurs, the acute cases of La Grippe and colds are not apt to produce sinus trouble, for just as soon as the swelling subsides the least bit, good drainage is established and soon the patient breathes properly through his nose. Airiation being perfect the nose is sterillized by the pure air, and very soon the whole structure is restored to normal by the process of nature. A little assistance may be necessary in severe cases.

You may put this down as a maxim: When we breathe through our nose properly and drainage is perfect at all times we never have catarrh.

Notice how the air should circulate through the nose. Not horizontally but in a circle. Going upward and over and downward forming a half circle.

The symptoms of sphenoid trouble are very obscure at times and often the diagnosis is very difficult. In the acute stage there is fever, increased pulse, the patient is in bed, complains of severe headache at base of skull and back of head. The nares are swollen and red, the middle turbinate is pressing against the septum and the lateral side of the nose. In the chronic form the symptoms are the same only much milder and the patient is up and around doing his work, and complains of discharge from the nose with a dripping back into the throat, more especially after rising in the morning when he has trouble to clear his throat of the secretions that have accumulated during the night.

The fiinding of pus in the region of the osteum spheniodallis and a dull pressure pain at the base of the skull and the back of the head is almost characteristic. You may locate the pus by applying a small roll of cotton in the region of the opening and letting it remain for a few minutes. If there is pus on it you may be sure of your diagnosis. The cotton may be saturated with cocaine solution to shrink the adjacent tissues and prepare for further examinations. Then you must not be satisfied with the examination. You may have to make several before you can be sure of your diagnosis.

Before we take up the treatment we will say a few words on examination of the sphenoid sinus, which is very important, in fact it is necessary that we know how to make an examination before we can make a diagnosis as well as to apply the treatment. Diagnosis is the thing, gentlemen, it is everything. Anyone knows what to do after the diagnosis is made. First thing we must know the anatomy well. We should have observed the relations of the parts and the location of the anatomical landmarks and the anomilies and malformations on the dissected skull. We cannot study the anatomy from the patient satisfactorily. After we know the location of the sphenoid sinus with its opening we must know how to locate the opening with a probe Our light should be good and reflected from a head-mirror. We should be accustomed to using the light and the reflector and above all to look through the opening in the mirror. Now the probe. We have a cut here of a probe devised by Dr. A. H. Andrews of Chicago that I think, and so does every one who uses it, that it is the best thing that has ever been made to find the sphenoid opening. He has a whole set of instruments devised on the same plan for treating sphenoid disease.

This probe is of alluminum and has, as you see, two curves, first about one

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inch from the small end is curved upward, and just back of this it is bent downward, bringing the end back on a line with the shaft. This probe bent this way can do no harm, cannot be forced through the cribiform plate of the ethmoid or through necrotic posterio-ethmoid cells into the brain as a straight probe could do. The probe is graduated in c. m. from 6 to 10 so that it may be used according to Andrews' rule for knowing when we get into the sinus. Pass the probe back through the nose to the posterior pharyngeal wall, note the distance on this graduated probe from the tip of nose. Then the same distance on probe passed up in the way we have described before, starting from the nares at an agle of about 45 degrees across the middle part of the middle turbinate along the side of the septum to the upper posterior part of the narrow slit, will put you in the sinus. You can see by observing the dissected specimen that a probe can be bent laterly so as to pass around the middle turbinate to a prominence on the septum. We find some men using a straight or slightly curved probe to find the opening; this will not only fail to get into the sinus in many cases but is apt to do great harm by going through the cribiform plate. You most remember that you sometiems have necrosis of the posterior ethmoid cells when you have sphenoid disease and a straight probe will easily pass into the brain.

When we know this technique of examination, we are then able to make a diagnosis which is all important in this trouble as well as in general practice ad surgery. Treatment is not so hard after the diagnosis is certain.

When you examine the nose that has sinus trouble, you will almost invariably find a hypertrophy of the middle turbinate, which will attract your attention, and well it may, for it is the most important part of the nasal anatomy that is concerned in this disease. But behind all this you will find that the deflections and spurs of the septum are the causes of this hypertrophy. I want you to remember that the irregularities of the septum cause most cases of catarrh. But after the hypertrophy has taken place then our attention is first called to the obstruction. Now just a few words about this middle turbinate, for it is the key that unlocks the disease of all the sinuses as well as the sphenoid. When the turbinate is hypertrophied and pressing against the septum and the lateral side of the nose, it checks the drainage of all the sinuses. The maxillary sinus, the frontal sinus and the anterior ethmoid sinuses drain beneath the midle turbinate into the hiatus semilunaris or some of the sulci. So when pressure is made on the lateral side of the nose, drainage is imperfect from these sinuses. The posterior ethmoid and the spheniod sinus empty above the middle turbinate and drain down between the middle turbinate and the septum. So when pressure is against the septum your drainage is bad. You can readily see, too, that deflections and spurs of the septum will increase the pressure and add fuel to the fire.

The treatment then sums itself up to this one thing: Establish drainage, just as you would in any other surgical proceedure. Then, too, this reduces all cases of catarrh to surgical treatment. There may be some exceptions but they are few. This way of spraying and douching the nose with glycothymoline is all a farce when it comes to curing the disease. It is paliative and cleansing is all that can be said of it.

If you have a sinus that is diseased your drainage is bad. Establish drainage and your patient gets well. Keep the crusts and mucous cleaned out with saline solution so as to keep up your drainage. This is the whole treatment in a nutshell.

The drainage may be established in many cases of the acute trouble by shrinking the turbinates and the adjacent structures to the ostium sphenoidallis with cocaine and adrenalin.

In the chronic form where the middle turbinate is hpretrophied or where polypus have formed, or where large spurs and deflections of the septum are a hindrance, they will have to be re-

moved before your treatment will be of any effect. Often this is all that is necessary. If the ciliated epithelium is not all destroyed it will throw out the pus and mucous through the normal opening and your sinus will get well. But if it is destroyed the discharge will continue from the cell which has been converted into a pus cavity. If it should continue for more than a month then we have to use other proceedures to get the sinus to drain. At this stage of the treatment we know well where the normal opening is and can pass a probe into it easily. We have a catheter bent in the same way as the probe that we can place in the opening and drive the pus out with compressed air. After doing this a few times, if there is no improvement, we can douche the sinus with a mild antiseptic through the same catheter, and then leave the sinus filled with argyrol. If this does not suffice we will then have to open the sinus for better drainage. And at any time in probing the sinus we should find any denuded bone or cares we should then without further treatment establish drainage at the most dependent part of the sinus. This is best done with a knife bent as the probe. Break down the oblique anterior wall of the sinus, beginning in the ostium and coming downward and backward to the bottom of the sinus. In this way we are sure to do no harm. A curet then may be used to enlarge our opening and to take away any granulations and diseased ethmoid cells. We must be very careful in curetting the sinus, for the superior and the lateral walls are very thin and we can easily injure the optic nerve, or go into the cavernus sinus of the brain, or into the internal carotid artery.

In treating the sphenoid sinus we are often compelled to give our attention to the other sinuses and treat them. Establish drainage, curet and break down where it is necessary. With this treatment thoroughly done your case, even if it be the very worst kind, will get well.

REPORT OF A CASE.

C. U., age 28, a farmer.—For the last eight years has had a muco-pus discharge from the left side of the nose. Post nasal dripping very bad. Had severe pain at back and front of head with a dull pain at the base of brain. These attacks came on every three or four days and last about three days, when a copious discharge of yellow thin pus would relieve the pain. Then he was at ease for three or four days, when the trouble would recur.

When the pain was at its worst, the body of the right side, opposite from the pain, would become tingly and numb down into the toes and the tip of the fingers. He would get dizzy and almost fall.

He first sought a physician for this dizziness, for he was told about three years ago that he had epilepsy. He had the same symptoms with his head and nose with these dizzy spells, though at no time did he become unconscious. After several months he got better but the discharge continued.

About six months ago he commenced to get dizzy again. This got worse as the pain in the head increased, so he went to his family doctor, Dr. Kelso, who referred him to me. On examination of the nose, there was a discharge of pus from both sides. The inferior turbinates were both enlarged, pressing against the septum, and the left was hypertrophied and hanging on the floor of the nose. I shrank the turbinates with cocaine and adrenalin and found the left middle turbinate hypertrophied, pressing firmly against the septum.

I applied some small rolls of cotton saturated with cocaine solution up between the middle turbinate and septum. After a few minutes we coul dget our sphenoid probe up in the region of the opening. After three applications of three minutes intervals, we got into the sphenoid sinus through normal opening. We blew out about two drachms of thin yellow pus and the pain and other symptoms were relieved immediately. I treated him for a week every day, probing the sinus. He would blow out small amounts of pus at times. Every time he would get easy.

After one week's treatment and diagnosis was certain, I removed one-third

of the anterior portion of the middle turbinate, and the lower hypertrophied part of the inferior turbinate. Used saline solution and argyrol, probed the sinus every day for a week, and in two weeks the discharge was entirely stopped and there was no more pain and dizziness nor numbness after the removal of the middle turbinate. This was practically the whole treatment.

CASE No. 2.

A case of general sinus disease as well as the spheniod.

Miss B. M., age 20, complained of pus lodging in the post nasal space. Choking after rising in the morning. Pus running down into the pharynx. It was beginning to affect the stomach. Gastritis from swallowing the pus with her food. Removed one-half of hypertrophied middle turbinate, established drainage, and after three months the discharge had gradually stopped.

CASE No. 3.

A case of Papilitis or Choked Disk. Case treated in the Chicago Eye and Ear Hospital by Dr. Ballinger.

Complained of bad vision for last six months. When admitted to the Hospital his vision was 5-200 in the right and 3-200 in the left. Vision failing rapidly. Examination of eyes showed papillitis or choked disk in both eyes with atrophy of the retina. He had general sinus disease with necrosis of part of the anterior wall of the spheniod sinus mucus membrane denuded. Pain was very severe at times with a constant discharge of pus from the nose.

Operated on the sinuses, removed all of the middle turbinate, broke down the remainder of the anterior wall of the sphenoid, curetted the posterior ethmoid cells and packed cavity with iodoform gause. The eye symptoms began to improve immediately. Vision ran up to 20,200 during the month, when he was sent home. The discharge much less and the health improved.

PARENCHYMATOUS GOITRE

Greaves, (British Medical Journal) tells us that in parenchymatous goitre there is glandular proliferation which results in the production of clusters of cells or of glandlike acini lined with epithelium, which may be somewhat irregular and flattened compared with the normal gland. The enlargement is at first symmetrical, but later its shape becomes irregular, due to the formation of small cysts or the growth of a definate encapsulated adenoma, which in its turn becomes cystic. Malignant new growths and suppuration are other causes of asymmetry. Many goitres, besides the deformity and slight dyspnoea, give rise to no other symptoms. Dyspnoea, however, is often urgent, and depends on several factors, among them being direct pressure on the sides of the trachea, impaction of an enlarged lobe or lobes behind the sternum, pressure on the recurrent laryngeal nerve, etc. Dyspnoea due to penetration of the trachea may be due to malignant disease or rupture of a suppurating cyst. Acute oedema of the glottis is occasionally seen, especially in malignant cases. Difficulty in swallowing is not a common symptom. Pressure of the cardiac nerves and on the large blood vessels may cause tachycardia, irregularity of the heart, and oedema of the head and face. These are mechanical symptoms. If the gland is removed or atrophies, the symptoms of myxoedema supervene. But symptoms of hyperthyroidism are uncommon in simple hypertrophied goitres. The amount of colloid material present is no indication of the amount of active internal secretion. The enormous increase of colloid in these cases is probably a sign of gland degeneration rather than of increased cell activity. But the colloid is probably the vehicle which contains the active internal secretion. The immediate results of thyroid operations are excellent; healing by first intention is practically always obtained. The writer describes his method of operating, but gives no results.—New York Medical Journal.

The legitimate and unbounded field of the general practitioner has just begun—the general practitioner will never be "passing."

GLAUCOMA.

(By Dr. W. M. Nagle, Muskogee, Okla.)

Glaucoma is a common disease constituting about 1 per cent of all diseases of the eye. The least confusing presentation of the subject is under its two extreme forms; acute inflammatory and chronic simple glaucoma. All other varieties occur between these two, partaking more or less of one or the other. due to the same cauuse, differing in degrees of intensity.

This leads us to ask ourselves, "What is the real exciting cause of Glaucoma?" We all know that the chief and essential symptoms of Glaucoma is increased inter-ocular tension, increased hardness of the eyeballs. We also know that it is a disease of old age, rarely occurring before the age of thirty. Some writers concluded that the lens increases in size in advance life, and hence in small cornea, the lens encroaches upon the circumlental space and retards the outflow and hence regards this the exciting cause.

Priestley Smith adopts the retention theory, and holds that the main predisposing cause of primary glaucoma is an insufficient space between the margin of the lens and the structure which surrounds it; and he attributes the greater liability of elderly people to the progressive increase of the size of the lens which he has undertaken to cdoleh.tb which hehas proven to occur as life advances. In eyes in which the circumlental space is insufficient by reason of either the original structure of the eye and small eyeballs, as Priestly Smith has shown, are especially liable to primary glaucoma, a fact often demonstrated by the small size of the cornea in the eyes attacked or of the enlargement of the lens, any condition which tends to overfill the veins of the head and uveal tract may initiate an attack of acute glaucoma as follows: An increase in the amount of blood in the uveal tract must be compensated by the expulsion of some other fluid from the eye; consequently, the aqueous humor filters out more rapidly than is normal at the angle of the anterior chamber. As the contents of the chamber diminish the lens and iris move forward towards the cornea. Now in the normal eye, and especially in the youthful eye, this compensation is effected without danger to the anterior chamber, because the lens is comparatively small, the circumlental space large, and the anterior chamber deep.But when the lens and ciliary processes are already in close relation with each other, and the anterior chamber already shallow, then any increased fullness of the uveal tract involves danger to the angle of the chamber. The turgid ciliary processes find insufficient space for their expansion, they are carried forward together with the lens, and pressing upon the base of the iris, lock up the angle of the anterior chamber. Thereupon, the further escape of the fluid being impossible, high tension of the eyeball is established. According to this explanation, then, the high tension is due to impeded escape of the intra-ocular fluid, and depends primarily, rather upon an increase in the amount of blood in the eye, than on an excess of the intra-ocular fluid. Priestly Smith considers that in chronic simple glaucoma, the predisposing causes are the same as in acute glaucoma; but that in the former, the vascular disturbance being gradual and slight, the vessels adapt themselves to the slowly increasing pressure, and the angle of the anterior chamber is more or less compressed but not tightly closed.

Von Graefe believed that a serious choroiditis lay at the root of the disease which he thought was caused by the exu dation of serous fluid into the vitreous humor; while Donders, von Hippel, Grunhagen and others held that irritation of the fifth pair of nerves, governing the secretion of the intra-ocular

*Read before the Oklahoma State Medical Association at Sulphur, May, 1908.

fluids, gave rise to hypersecretion of those fluids.

Others again held that changes in the sclerotic, rendering it rigid, and leading to some shrinkage of it, caused the increased intra-ocular tension.

Laquer believes that some such sclerotic change produces obstruction of the posterior ways of exit of the intra-ocular lymphatics, namely, those which pass out with the four vasas vorticosee, and that the glaucoma depends largely upon this obstruction.

But these theories are now obsolete, and I mention them merely as being of historic interest.

As regards the Pathology of Glaucoma the theory which of late years has obtained most acceptation owes its origin to Max Knies and Adolf Weber and is known as the Retention Theory. These observers ascertained that in Glaucomatous eyes the periphery of the iris lies in contact with the periphery of the cornea in the region of the canal of Schlemm, venous plexus, and ligamentum pectinatum. But this region and these tissues has previously been proved by Leber to be the ways of exit of the effects ultra-ocular fluids, which flow to the point from the posterior part of the aqueous chamber through the pupil. Weber and Knies concluded, therefore, that the blocking of these passages from the close application of the iris, caused glaucoma by preventing the effect fluids from escaping; and that thus the disease was one of retention rather than of hypersecretion, as it had previously been considered to be. Weber believed that swelling of the ciliary processes, from one cause or another, pushes the periphery of the iris forward, and gives the starting point for glaucoma.

Brailey to a certain extent adopts the view of Weber, but regards a chronic inflammation of the ciliary processes and periphery of the iris, with distention of the blood vessels of these parts, to be the chief factor in the earliest history of the disease.

Max Knies also regarded glaucoma as an iridocyclitis, which owing to varying intensity, produces the different forms of the disease.

In my judgment these claims are open to objection as it pertains more to the symptoms of the disease than to the true cause of the disease. What diagnostician would regard jaundice and dropsey other than symptoms of a disease. Hence if inter-ocular tension is either due to hypersecretion or retarded outflow is it the true cause, or should we suspect that there is some lurking diathesis in the way of gout or rheumatism which restricts the caliber of the delicate ciliary artery and thus retard the outflow. An operation which lessens the surface pressure upon the vascular system within the eye, whatever the result, seems in reason open only to this explanation; for such vessels have no vass-motor system (Gray's Anatomy, 8th edition, page 77) and no power of contraction, but dilate and contract in response to the greater or less force extra-ocular blood current. The hypothesis of a derangement of the functions of secretion as a cause of high inter-ocular tension, serious if not insuperable objection exist, although it had be accepted for many years as the best offered. It is based upon the assumption that, increased inter-ocular tension is the essence of the disease and the cause of all its evils and that glaucoma is purely local.

This is unsatisfactory to one who has watched an attack of acute glaucoma from its inception unless he be willing to ignore the constitutional history and complications of the malady, or to one who has followed the progress of a chronic glaucoma through all its phases and modifications, not limiting his observation to the special local developments. The disease has been correctly defined as a complex of symptoms, for the involvment of each component tissue of the bulb compels it to give voice to its distress. Though high inter-ocular tension is a cause of some of the other symptoms, dearrangement of inter-ocular secretion could not accomplish what we find in glaucoma. If there were at the same time increased

secretion and retention, the inter-ocular contents by the action of both would only the more quickly reach a point short of the high tension of acute glaucoma, at which, the resistance to secretion would be too great for its continuance, for the secretion of the aqueous is a transudation and osmosis and lacks the intensity even of a glandular secretion. Reasoning by exclusion from frequently ascertained and unquestioned fact constrains to the conclusion that a condition always found in acute glaucoma which will account for all its features distortion, offers the true explanation of the form of the disease, viz:

A great enlargement of the intra-ocu within the sclerotic must do so poster lar blood vessels, overfilling the space iorly, about the entrance of the arteria centralis, the twelve to twenty short ciliary arteries and the two long ciliary arteries which pierce the sclerotic at a right angle; elongating the corpus viterei in the direction of the length of the vessel by latral pressure which is magnified by the acute venous stasis developed by any slight increase of intra-ocular pressure upon the vena vorticosae as they pass very obliquely out through the sclerotic, and advancing the corpus vitrei, lens, and iris by pressure from behind reducing the depth of the anterior chamber, and applying the iris to the cornea, thus obstructing the anterior channels of filtration, after increased intra-ocular tension has been produced.

The direct course of the arteries through the sclerotic permits ready access of arterial blood ,any increase of which beyond what is normal with the eye, must exert some pressure upon the stretching of the scleroritc which in time narrows the lumen of the veins passing obliquely through it still farther increasing the inter-ocular pressure until stasis is absolute.

The engorgement of the vessels of the fundus oculi exciting an acute glaucoma always in direct ratio to the volume of the attack conclusively shows it to be distinctyl vasular, a state of the system which leads to a reduction in the caliber of the peripheral vessels demanding an increased effort on the part of the heart will account for this because as the contraction of the peripheral vessels diminishes the size of the blood current passing through them, the propulsive effort of the heart must increase and then determine the volume of blood in the direction of the least resistance. Obviously the cause must be some element in the blood which narrows the caliber of the vessels by irritation aided at time by the contracting influences of low surface temperature or by some emotion exciting a reflex from the base of the brain. Age is a predisposing influence as it is physiologically a period of substitution fibrosis. If it were an active agent we would find an increase of simple glaucoma with advancing age.

A new connective tissue growth has by anatomical dissection and microscopical examination been found in all the structure of the glaucomatous globe, hence we must look to some irritant exciting vascular and neurotic disturbance affecting nutrition. The pressence of such an irritant inherited or acquired constitutes a diathesis. The preponderance of evidence indicate glaucoma to belong to the diathesis termed arthritis which includes gout and rheumatism.

If my theory is correct as to the cause of glaucoma, the treatment is too well known to take up your valuable time, and, too, I would feel, if I should make any suggestions as to local treatment and operative proceedures, would be a reflection on your intelligence as professional men, as the books are very plain and specific, and is very familiar to you all. W. M. NAGLE.

XUM

EXPERIENCES IN CATARACT EXTRACTION, PRECEDED BY IRIDECTOMY.

(By Dr. A. D. Johannes, Oklahoma City)

Introduction.

It affords one great pleasure to be able to relate valuable experiences to persons so well qualified, as my present audience, to understand and appreciate just what these things mean, and who may possibly be able to profit in a small way here and there. Should anyone be able to make use of anything I have to say, I shall be well repaid for the telling.

The experiences which I am about to relate were gathered at the Imperial University Eye Clinic in Berlin, with the Real Privey Councillor Julius von Michel as its most efficient chief.

KIND OF PATIENTS OPERATED UPON.

Practically all patients affected with cataract were operated upon, little or no attention was paid to the kind of a cataract, except that the same were diagnosed and recorded. Complications of all sorts, such as luxation of the lens, glaucoma and detached retinae, were not held to be contraindications for the operation, as long as the patient had light perception and light projection. Of course acute inflammatory conditions of any part of the eye made the operation impossible for the time.

No particular attention was paid to the degree of ripeness of the cataract, the chief consideration was the amount of vision of the patient. No matter what other condition prevailed, if the amount of vision was insufficient for the patient's needs the operation was carried out.

Naturally the proper tests were made to ascertain as far as possible the condition of the retina and optic nerve—and when they were found so deficient that the eye lacked high projection, the operation was not made.

Complications on the part of the conjunctiva and tear apparatus were dealt with according to common methods. Sometimes an extirpation of the tear sack had to be made before the cataract could be removed.

Cases of unilateral cataract, with nearly normal vision in the unaffected eye, were operated if the patient wished it. That is the patient was advised to have the operation done, but was informed, that it was not absolutely necessary.

I will not go into the details of the examination preparation and training of the patients, but will mention, that before the operation the area around the eye was thoroughly scrubbed with antiseptic soap, the lashes were cut close to the margin of the lids, the conjunctival sacks were repeatedly rinsed with sterile normal salt solutions, and under continuous irrigation of normal salt solution the patient was instructed to repeatedly wink the lids.

Cocain was used as an anesthetic, 3-6 drops of a sterile 10 per cent solution was used at intervals of 3-5 minutes until six instillations had been made.

THE OPERATION.

The sine qua non of the operation is the right incision. In all the operations the cut was made with a narrow knife known to all of you as the Graefe Cataract knife. The incision comprised, say 1-3 of the periphery of the cornea, the points of entrance and exit were opposite, on a level and ¾ to 1 mm from the corneal margin, entirely in the sclera. The knife was moved in a sawing motion from below upward, until the upper margin of the cornea was reached, when it was turned so, that a considerable flap of conjunctiva was dissected. As much as 4 mm long. This flap is of the greatest importance.

Next the conjunctival flap was carefully laid over the cornea, and the iridectomy made in the usual manner.

Next a cystotome was used to tear and cut the lens capsule, and the lens delivered in the usual manner. After

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removal of any flocculent masses of lens substance, the iris was readjusted, the large conjunctival flap replaced and after 3--4 instillations of a 1 per cent sterile atropin solution both eyes were bandaged. Such in short is the manner of the operation.

In cases of cataract which were uncomplicated, and in which no complications arose during the operation, the processes of repair began with the restoration of the anterior chamber. Thanks to the long conjunctival flap, this took place in many cases even before the first bandage was placed. And in nearly all cases the anterior chamber was fully restored in twenty-four hours. The bandages were changed for the first time in twenty-four hours. At this time the operated eye only was bandaged, a few drops of sterile atropin and a simple boracic acid ointment were first applied. From now on the bandages were changed every twelve hours, the mydriastis was kept up. During all this time the patient was advised to merely keep more quiet than ordinary, otherwise his method of living was not changed. After four days the patients eye was bandaged only at night.

As unusual complication during the operation I wish to mention a case in which, during the act of pressure to deliver the lens, it turned completely bottom end up and was safely delivered, and the eye made an uneventful recovery.

In thirty-eight out of twelve hundred cases Webers lens loop had to be used, nearly all of these cases were complicated by pronounced arterio sclerosis of the aorta, and large vessels. Two of these had diabetes mellitus, two had had a cyclitis, recently healed, three had a high degree of arterio sclerosis of the retina and choroid, and pigment degeneration of the retina. Twice there was a loss of virtreous when the systotome was inserted, and indeed in one case, considerable vitreous escaped at the moment of the withdrawal of the Graefe knife.

In one case the lens slipped in such a manner into the vitreous, that the same could not be delivered and was left in situ, but the eye healed without any further complication, and the patient obtained ¼ of normal vision. In ten other cases there was considerable loss of vitreous, even though the loop had not been used, nor were there any further serious consequences.

Two cases could not be finished owing to the bad behavior of the patient, who in spite of the training to which they are subjected before the operation could not control the movements of their eyes. One of these had a second and successful operation a few weeks later, in which there were no complications and the outcome was very satisfactory to all.

COMPLICATIONS AFTER THE OPERATION ON PART OF THE CORNEA.

We need not concern ourselves over the numerous cases of haziness of the cornea due to lessened noruishment, they all subsided without attention.

In three cases a keratitis bullosa developed, one of them right after the operation, one fifteen days and the other fifteen months after the operation. All of these healed after some little while but left some small haziness where the vesicles had been.

In three per cent of the cases the anterior chamber was not restored in the first twenty-four hours. The longest time was seven days. In most of these cases one could see a small diastase in the angles of the incisions, and no cause for this failure to close could be found.

Hemorrhages were rather frequent. It occurred sixty-seven times in otherwise uncomplicated cases. In all of them no real cause for the hemorrhage could be found. One was forced to conclude, that they were caused by various slight trauma, such as coughing, sneezing, touching the eye. These hemorrhages occurred mostly between the second and tenth day. All of them were allowed to resorb spontaneously, and in no case did they cause any untoward result.

The complications on the part of the iris were comparatively few in number, considering the fact that the same was subject to considerable trauma. Even

in the hands of the most skilfull operator there is considerable handling for a structure so delicate as it is. In the great number of cases there were only twenty-two of iritis. They occurred within three to six days after the operation and seemed to be caused by the chemical irritation of remaining cortical substance. They healed without any permanent consequences.

More serious were twenty-five cases of iridocyclitis, accompanied by some cloudy precipitates, and in some cases hypopion. Remarkable it was, that these did not make their appearance until a week or more after the operation some indeed as late as two months, and in one case nine months after the operation. Some of these cases suffered great loss of visual power owing to the organization of the exudates. In twelve of these cases secondary glaucoma affected the vision, and in one case the eye had to be enucleated to prevent sympathetic ophthalmia.

Besides these twelve cases of glaucoma , which went hand in hand with the iridocyclitis, there were nine cases of glaucoma without other disturbances. In all of these cases no cause could be discovered except that they all had arterio sclorosis and enlargement of the heart. Here I may mention seven cases of chronic glaucoma, not counted elsewhere, which could not be diagnosed before the removal of the lens.

The vitreous escaped all serious complications, though their number was not small. There were fourteen cases of hemorrhage into the vitreous, but all these cleared up without attention. Altogether there were ninety-five cases of temporary diffuse opacities of the vitreous, of which thirty-five retained some formed and permanent opacities, to lessen the amount of vision the patient received. But in no case was this a serious complication. Most of them occurred in patients with marked degree of arterio sclerosis.

The retina was seldom involved in any complication.

Four times detachments occurred. Once right after the operation without discoverable cause twice in patients of high myopia and once as the end result of chronic cyclitis.

Now we come to the interesting chapter of infection. Of all the 1284 cases there were only seven infections. All of these started on the third day after the operation. They began with a little center of pus formation at the margin of the incision under the conjunctival flap, or at the incision of the corneal margin. In spite of active treatment, such as cauterization, irrigation of the anterior chamber, and introduction of Iodoform, etc., all of them had an unsatisfactory ending.....Three of the eyes were completely lost by panophthalmitis. In four cases the process could be arrested, but vision was practically lost. One case died of pneumonia, and one case disappeared from observation.

Delirium occurred in seven cases of which four became maniacal, but none suffered any permanent injuries.

Erythropia after the operation was not uncommon, and one very persistent case of cyanopsis disturbed one patient for several weeks.

Nearly all these people were fitted with glasses four weeks after the operation. The processes of repair are at this time not fully completed, and the results in vision have of course not reached their maximum, and when the influence of the mydriatic has subsided, that too, will have a favorable influence upon vision. From all this it will be seen, that many patients obtained better results finally than here shown. Tables and figures are seldom interesting reading. But the following figures must necessarily be interesting to us, when we remember, that over twelve hundred persons nearly or completely blind obtained sight.

Of these 116 reached 20-20 or 1.
156 reached 2-3 and better.
266 reached 1-2 and better.
161 reached 1-3 and better.
110 reached 1-4 and better.
67 reached 1-6 and better.
62 reached 1-10.
26 reached 1-20th.
35 less than 1-20.

3 reached light perception.
Five became amuarotic.
Three died of intercurrent diseases.

In most of the cases where so little vision was obtained, small amounts of cortical substance were left behind, and instead of being absorbed had become fixed, and thus caused insufficient vision. And as many of these are frequently absorbed after sufficient time, these cases obtained still better results than our table shows.

The study of the refraction in these cases is an interesting one. But time forbids, that I should go into detail of it. Suffice it to say, that most of the eyes were corrected with plus 10 and plus 11. Two required plus 15. Another needed glasses from plus 1 to plus 6. Indeed of these one eye required no glass at all, and another had to have a concave lens of 1 D. Many of these required a cylinder combined with the spherical glass. Plus 2 cylinder being most often accepted. Quite a number of plus 4 and 5 cylinders were needed. Striking was the fact that the lower the amount of spherical correction needed as a rule the higher cylinder was was required.

And those cases which had attained normal vision seldom required any cylindrical correction.

The axis of the cylinders was in nearly all cases horizontal or nearly so. However about sixty cases had their axis inclined toward the vertical. This clearly shows the relation of the astigmatism to the corneal incision.

Now in closing just a word about the secondary operations, which were done in sixty one cases. In most of these it became necessary to remove some swollen lens substance or thickened lens capsule. These operations were done in the ordinary way and seldo mgave any trouble or complication.

GALLSTONE DISEASE.

Deaver, in an article on gallstone disease, in the American Journal of the American Medical Sciences says: "While of late years much consideration has been given to the subject of gallstone disease, and while many brilliant cures have been brought about by proper application of surgical methods, the last word on the subject has yet to be written, and there are many more points of equal interest to the internist and the surgeon that impress me with the importance of further discussion of disease of the biliary tract. By reason of its function as the excretory apparatus of the largest gland of the body, by reason of its intimate relation with vital organs in the upper abdomen, and by reason of its liability to infection and its commanding position to spread infection over a greater or less extent of the peritoneal cavity, the biliary apparatus may justly be considered unique."

He enters into the anatomy of the bile tract, and deals with the pathology of gallstone disease in his inimitable way.

He says that the larger one's experienece in gallstone disease the less able is he to state whether gallstones are or are not associated with cholecystitis.

The severity of the cholecystitis is indicated by general symptoms and varies with the virulence of the infection. He traces the infection from the gallbladder through the cystic and hepatic ducts into the interlobular bile vessels, and even into the intercelluler bile capillaries.

He says that a gall bladder once damaged by infection may, if the infection be mild, undergo complete resolution.

The natural history of gallstones is interesting; their accurate diagnosis satisfying; their removal comforting.

He closes his splendid article by saying, "Cholecystectomy is a procedure I avoid when possible. The gall bladder should not be removed unless we feel that we are taking away a menace to the future health and comfort of our patient. Sidney Phillips has well said that it is impossible for the surgeon to devise so perfect an automatic mechanism for storage and intermittent distribution of bile as the gallbladder. Aside from the danger of hemorrhage attending cholecystectomy we must look into the patient's post operative future. If at any time a second operation should be required, we may be only too glad that we have previously preserved the gallbladder as a valuable agent for drainage of the biliary tract, and that the operative field is comparatively free of adhesions, as is not likely to be the case if the gall bladder has been removed."—Indianapolis Medical Journal.

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DIAGNOSIS IN PURULENT DISEASES OF THE NASAL SINUSES

By Harry Coulter Todd, M. A., M. D.

Those familiar with Rhinology are aware of the difficulties which are often incident to a differential diagnosis in purulent diseases of the nasal sinuses. Not alone may one be confronted with symptoms of other affections irrelative to purulent nasal sinusitis, but a differentiation of the particular sinus or sinuses involved may become quite problematical. Contributory to these diagnostic uncertainties may be mentioned, *first*, Various anatomical relations between the nasal outlets of the *Sinuses nasi accessorii.*

It will be remembered if one reviews the anatomy of the parts under consideration that the sinus frontalis through the frontal duct and the sinuses ethmoidales anterior ,through the ethmoid openings, drain into the infundibulum which opens into the hiatus semilunaris, while the antrum of Highmore or Sinus Maxillaris, has its nasal outlet just below the anterior portion of the hiatus semilunaris. The hiatus semilunaris and the maxillary openings are situated in the middle meatus beneath the middle turbinate bone, slightly posterior to its median portion, the hiatus with the infundibulum and frontal sinus duct passing from below upward, making an angle of about thirty degrees with the perpendicular. Thus it will be observed that all drainage pursuing its normal channels from the sinus frontalis, the sinuses ethmoidales anterior and the sinus Maxillaris, makes its appearance in the middle meatus beneath the middle turbinate bone. Tilleaux has observed that the relation of the Hiatus Semilunaries to the Maxillary opening is such that if fluid is injected into the frontal sinus, instead of running into the middle meatus it passes in great part into the maxillary sinus. This diagram, reproduced from a drawing by Dr. Fillebrown of Boston, explains the reason for this. It will be seen that the hiatus terminates at or near the antral opening and that a fold of mucous membrane extends above the foramen producing a sulcus, at the bottom of which is the antral foramen, the fold referred to being on the inner side. Consequently a discharge from the frontal sinus or anterior Ethmoidal sinuses may fill the Maxillary sinus before it appears in the middle meatus, and thus the antrum may act as a resorvoir for pus from the above named sinuses without itself being primarily diseased.

Again the posterior Ethomidal sinuses have their openings into the superior meatus, the former into two or three deep grooves which may be observed on the posterior portion of its external wall extending from before backward, an dare called the ethmoid sulci, and the latter into the spheno-ethmoidal sulcus situated at the upper and posterior angle of the superior meatus between the anterior wall of the sphenoid and ethmoid. Hence the drainage from the posterior Ethmoidal sinuses and the Sphenoidal sinuses is posterior in the superior meatus and the nasopharynx.

Second: Various anatomical relaaions of the Sinuses Nasi accessorii themselves contribute to a complicity in diagnosis. It may be noted that the anterior and posterior ethmoidal cells are in direct relation to each other as are the posterior ethmoidal cells to the sphenoidal sinuses and the lower portion of the ethmoidal cells to the upper portion of the Maxillary antrum; also the frontal sinus, especially the frontal sinus duct, is in direct relation to the anterior Ethmoidal sinuses. From this one may rightfully infer that purulent infection of any one of the accessory nasal cavities may readily involve any one or all of the others by the breaking down of contiguous walls between them.

Notwithstanding the difficulties to a differential diagnosis presented in the foregoing, still there are various facts and methods of observation and examination which enable the skillful rhinologist to determine with some degree

of accuracy the sinus or sinuses involved in a purulent nasal-sinusitis.

The following anatomical facts should be borne in mind: The Maxillary sinus is present at birth. The Ethmoidal and Sphenoidal cells are exceedingly small, if present at birth, and begin development at the age of three, to attain their full capacity at about puberty. The frontal sinus is absent and does not commence development until the seventh year of life and may not appear at all on one or both sides, or one or the other may be supplanted by a large Ethmoid cell. The course of the frontal sinus duct and the infundibulum are very irregular being situated sometimes in front of the uncinate process and at others entirely inaccessible to the frontal sinus probe.

For convenience in discussion, Empyema of the Sinuses Nasi Accessorii may be divided according to Beaman Douglas into *Open Empyema* and *Closed Empyema*. The term "Open Empyema" is applied to a diseased cell or group of cells from which the discharge issues with little or no obstruction. The term "Closed Empyema" is applied to a diseased cell or group of cells in which the discharge does not find an outlet but is retained as a cyst within the cell, producing in time characteristic symptoms from pressure, or deformities from enlargement of the cell. In general it may be said that the *closed* empyema is more likely to be acute in form, and the *open* empyema more likely to be sub-acute or chronic.

In Empyema of the Maxillary Antrum, whether acute or chronic, the osteum is more likely to be patent than is the case with the other sinuses.

In closed Empyema of the Nasal sinuses there is pyrexia and the Chart will reveal the irregular temperature line indicative of pus. Pain in the region of the sinus or sinuses involved—if in the maxillary antrum there is pain over the cheek, in the upper maxillary region and sometimes above the orbit; if Ethmoidal and Sphenoidal, there is pain in superior maxillary region and at the back of the eyes; if in the frontal sinuses, there is pain in the forehead, especially in the supra-orbital region. Oedema of the outer wall of the sinuses is not usually present, but as the pressure increases and the pus is not given an exit the sinus walls may be bulged at the points offering the least resistance. The antrum bulges towards the nasal septum; the Ethmoidal and Sphenoidal push inward the middle and superior turbinates and the lower and inner orbital plate is forced upward and outward, while in the frontal sinus affection the upper and inner orbital plate is pushed downwards and outwards, producing in either case Exopthalmos. Tenderness on pressure may be elicited over the region of the sinus involved and is often marked in Ethmoidal and Frontal sinus involvement over their respective orbital plates. Perforation of the infected sinus may occur and pus may be found above the inner canthus of the eye in the supra-orbital region in frontal sinus affection, and *within* the orbit if the Ethmoidal or Sphenoidal sinuses are involved, or there may be a perforation into the anterior fossa of the skull.

In acute or closed Empyema the writer believes that a good procedure and an aid to diagnosis is, after removing all granulation tissue that may be present, to douche the nose carefully for twenty or twenty-five minutes (20 or 25) with as hot water as can be borne by the patient, followed by a spray of 10 per cent solution of Cocaine or a 1 to 1,000 Solution of Adrenalin Chloride used every hour for six to eight hours, when by placing the head in the various positions the pus often begins to flow and one can the more readily determine which of the sinuses is involved.

In open Empyema of the sinuses, which is the type more often seen by the Rhinologist, most of the symptoms heretofore mentioned are likely to be absent and the only evidence one may have of accessory sinus nasal disease is the purulent discharge from the nose, with its natural attendant results, namely, oedema of the mucous membrane, granulation tissue and polypi.

In purulent posterior Ethmoidal and Sphenoidal disease, accuracy in diagno-

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sis depends largely upon accuracy in the rhinoscopy. An anterior examination will reveal pus flowing over the posterior and septal side of the middle turbinate. After carefully wiping away the excess of pus and, if necessary, cocainizing the posterior wall of the pharynx to overcome its extreme sensibility, one may by posterior rhinoscopy observe the pus escaping either from the Ethmoid Sulci or from the Spheno-Ethmoidal Sulcus, or from them all if both the posterior Ethmoid cells and the Sphenoidal sinuses are involved. When pus is found in the middle meatus of the nose at the external or eye side of the middle turbinate body, it should be traced to its source by means of pledgets of cotton wound upon applicators. As the pus is carefully wiped away, it can be traced higher and higher to its source until the investigator can definitely determine that it does not come from the Maxillary Antrum. If a probe covered with cotton is now applied to the region of the naso-frontal duct, in such a way as to block it, and the pus continues to flow over the posterior edge of the hiatus semilunaris and from the region of the bulba Ethmoidalis, it is safe to conclude that it is coming from the anterior Ethmoid cells and that there exists a case of open Empyema of the anterior Ethmoid cells. On the other hand, if plugging the frontal sinus duct stops the flow of pus entirely it denotes clearly that there is open Emphyema of the frontal sinus.

In the diagnosis of antral infection the trans-illuminator is often of considerable value. Care should be taken in its use to have the examining room absolutely dark and to place the light in the center and well back of the oral cavity. If there is fluid in the antral cavity that side of the face will remain dark and especially should be noted the absence on the affected side of the crescent of light below the orbit. Transillumination of the frontal sinus as a rule does not give any very definite information. The sinuses are difficult to transillume and the dark shadow may appear when the sinus is absent altogether as well as when it is full of pus. When the antrum is found to be full of pus, especially if the anterior Ethmoid cell or the frontal sinus is infected, the question may arise as to whether the antrum is really the seat of disease or whether it is simply acting as a reservoir for pus from the diseased sinuses above. It is the writer's practice in these questionable cases to pass a trocar and canula into the antrum at the turbinate process of the superior Maxillary, thoroughly wash out the antrum and then plug the antral osteum for 8 to 12 hours. If at the end of this period the antrum is found to have remained free from pus, it is safe to infer that it is not the seat of purulent disease.

From the foregoing the following deductions may be made:

(1) If pus is found in the middle meatus and is located well upward and forward within the hiatus semilunaris, and its flow is checked by plugging the hiatus, it probably comes from the frontal sinus.

(2) If the pus is in the same locality and its flow is not checked by plugging the upper part of the hiatus, it probably comes from some of the Anterior Ethmoid cells.

(3) If the upper part of the middle meatus is plugged and the pus continues to flow it probably comes through the lower part of the hiatus semilunaris, through the opening of the Antrum of Highmore. This may be verified by tipping the head to the opposite side and lowering it when the flow of pus will be increased if it comes from the Antrum.

(4) When pus is not seen in the middle meatus or to the Eye side of the middle turbinate body, but is discovered coming down the septum and the middle turbinate, it probably comes from the posterior Ethmoidal cells and may be observed by posterior rhinoscopy coming from the Ethmoidal Sulci.

(5) If the pus is well confined to the posterior pharyngeal wall and the Ethmoidal Sulci are free its origin is probably in the Sphenoidal Sinus.

BILIOUSNESS.

(By I. H. Voris, M. D.)

Mr. President and Gentlemen of the Johnston County Medical Society: At the last meeting of this society I was delegated to write an article upon the subject, Biliousness. I was greatly elated for I imagined that the subject was one with mhich I was thoroughly familiar. However, in order to comply with the conventions, so to speak, I concluded that the first thing in order was to consult at least one authority upon the subject. I did so. In fact' I consulted two, then three and finally everything that I could find containing the word from Tanner, published about 1865 to the Ladies' Birthday Almanac of 1909 and I assure you that I failed to find any two authorities, out of some twenty-five, who agreed in an opinion upon the subject. Every one of them seemed to have an opinion of his own which was directly in conflict with the opinion of every one else. One said misnomer no such disease. Another said specifically a disease. Without doubt a complication, sequella, primary, secondary, ad infinitum.

The Etiology of this disease, Biliousness, is almost as complicated as the process by which a fourth class postmaster receives his appointment. It may be an imflammatory process obtaining in any or all of the following organs: Liver, spleen, kidneys, lungs, heart brain, intestines and am satisfied that sufficient research among authiroties would have proven conclusively that the skin and its appendages are directly responsible for the condition. Last but not least, most any micro-organism invading the human system is nearly certain to produce an acute or chroni cattack of biliousness.

The symptoms of this disease are many and varied. We may or may not have any of the following manifestations: Loss of appetite, increase in temperature, loss of flesh, diarrhoea, constipation, vertigo, jaundice, hemorrhage from the lungs, bowels or dikneys. Ordinarilly we have a coated tongue, it may be any variety so long as it is coated. Skin is often discolored, ranging from a slight yellowish tint to a deep yellow. The patient may complain of anything or nothing.

The Pathology keeps up the reputation of the disease for peculiarities. We may or may not find an enlarged liver or spleen. The gall bladder may or may not be full of bile. The bile ducts may or may not show areas of inflammation. The intestines may or may not be empty. The mucous lining of the stomach is sometimes congested, sometimes it is not. In fact, we may or may not find almost anything.

The diagnosis is one of the easiest in the entire category. In fact, anyone can with a great degree of certainty diagnose a case of biliousness. The laity recognize it at a glance and any M. D. with fifteen minutes experience is an expert diagnostician when it comes to biliousness. The differential diagnosis is not so easy according to authorities. To condense and not take too much of the time of this body, I will say that it must be differentiated from everything from Alopecia to ingrowing toe nails.

The prognosis is ordinarily favorable, though there are occasions when it is not. The severity of the attack seems to have very little to do with the gravity of the prognosis, for sometimes the most severe cases recover, while at other times cases supposed to be very mild prove fatal.

The treatment comprises everything contained in Materia Medica, both official and unofficial. The sheet anchor of the laity in this section of the country seems to be calomel and qunnine. When it comes to the members of the profession the treatment is as varied as anything could well be. One will tell you cholagogue, another salines, one emetics, one diaphoretics, any and every thing from a hot foot bath to an X-ray treatment.

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MEDICAL SOCIETIES.

Major County.

A medical society was organized recently in Major county and the following officers were elected: President, B. F. Johnson, Fairview; Vice-President, R. T. Madison, Fairview; Secretary, Elsie L. Specht, Rusk; Delegate to State Meeting, F. E. Deimer, Fairview.

Johnston County.

The Johnston County Medical Society, at a recent meeting, elected the following officers, and carried out a very interesting program:

President, W. B. Reeves, Wapanucka; Vice-President, W. W. Britton, Tishomingo; Secretary-Treasurer, J. H. Voris, Mannsville.

Garfield County.

The Garfield County Medical Society met in Enid December 9, 1908, for the annual election of officers, and the following officers were elected:

President, W. A. Aitken, Enid; Vice-Pres., C. E. Thompson, Kremlin; Second Vice-Pres., W. E. Herrington, Lahoma; Secretary-Treasurer, P. A. Smith, Enid; Censors, G. A. Boyle, Enid (3 years); H. K. Wilson, Enid, (2 years); J. H. Barnes, Enid, (1 year); Delegates to the State Meeting, R. A. Field, Enid and J. H. Barnes, Enid.

Dr. Julian Field was elected a member of the Society.

Okmulgee County.

The next meeting of the Okmulgee County Medical Society will be held at Henryetta Okla., on Monday, April 5th, at 10 o'clock a. m.

A symposium on pneumonia was chosen at the last meeting as the theme for consideration.

The subject has been assigned as follows: Etiology, Dr. Stephanson; Pathology, Dr. Culp; Symptoms, Dr. Breese; Treatment, Dr. Shankle, Dr. J. A. Milroy.

Please try to attend this meeting and help make this a day of profit and recreation.

Pottawatomie County.

Program of three months lecture and quiz course of Pottawatomie County Medical Society:

Saturday evening, February 13.—Meeting at Dr. Bradford's office, at 8 p. m., Whittaker building, Dr. Henderson entertaining. Lecture: Foreign Bodies in the Eye, Dr. W. E. Henderson; Quiz: Abnormal Positions of the Uterus, Dr. J. M. Byrum.

Saturday evening, Feb. 20.—Meeting at Dr. Bradford's office Dr. McGee entertaining. Lecture: The Salicylates, Dr. W. N. McGee; Quiz: Foreign Bodies in the Eye, Dr. Henderson.

Saturday evening, Feb. 27.—Meeting at Dr. Bradford's office, Dr. Henderson entertaining. Lecture: Nasal Obstruction, Dr. W. E. Henderson; Quiz: The Salicylats, Dr. W. N. McGee.

Saturday evening, March 6.—Meeting at Dr. Bradford's office. Lecture: Sassafras, Sarsaparilla and Senna, Dr. W. N. McGee; Quiz: Nasal Obstruction, Dr. W. E. Henderson.

Saturday evening, March 13.—Meeting at Dr. Hughes' office, Pottawatomie Building. Lecture: Pelvic Inflammatory Disease; Quiz: Sassafras, Sarsaparilla and Senna.

Saturday evening, March 20.—Meeting at Dr. Wilson's office, Mammoth building. Lecture: Brain Tumors, Dr. H. H. Wilson; Quiz, Pelvic Inflammatory Disease, Dr. J. E. Hughes.

Saturday evening, March 27.—Meeting at Dr. Hughes' office. Lecture: Sterility, Dr. J. E. Hughes; Quiz: Brain Tumors, Dr. H. H. Wilson.

Saturday evening, April 3.—Meeting at Dr. Wilson's office. Lecture: Asthenopia. Accommodative and Systemic. Dr. H. H. Wilson; Quiz: Sterility, Dr. J. E. Hughes.

Saturday evening, April 10.—Meeting at Dr. Carson's office. Lecture: Tuberculine. Dr. F. L. Carson; Quiz: Asthenopia. Dr. H. H. Wilson.

Saturday evening, April 17.—Meeting at Dr. Blickensderfer's office, Tecumseh, Okla. Lecture, Gonococcus Infection of the Female. Dr. C. Blickensderfer; Quiz: Tuberculin, Dr. F. L. Carson.

Saturday evening, April 24.—Meeting at Dr. Carson's office. Lecture: Preparations of Sodium and Silver, Dr. F. L. Carson; Quiz: Gonococcus Infection of the Female.

Saturday evening, May 1.—Meeting at Dr. Blickensderfer's Office, Tecumseh. Lecture: Abortions, Dr. C. Blickensderfer; Quiz: Silver and Sodium, Dr. F. L. Carson.

Saturday evening, May 8.—Meeting at Dr. Pigg's office. Lecture: The Animal Extracts, Dr. W. B. Pigg; Quiz: Abortions, Dr. C. Blickensderfer.

Saturday evening, May 15.—Meeting at Dr. Carter's office. Lecture, Dr. J. S. Carter; Quiz: Animal Extracts, Dr. W. B. Pigg.

Wanette meeting, extra, Date to be announced later.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

Next annual meeting Medical Association of the Southwest, San Antonio, Texas, November 9-11, 1909.

Secretary's office El Reno, Okla., March 1, 1909. Special information to those planning to go to the annual meeting of the A. M. A. at Atlanitc City:

All members of the Medical Association of the Southwest are invited to join the members of the Missouri Valley Medical Association, who have arranged for a special train for this trip from St. Louis. Stop-over privileges will be arranged for all points of interest.

If you are planning to go, write to Dr. Chas. Wood Fassett of St. Joseph, Mo., who will give full information as to route, rates, etc.

The next meeting of the Missouri Valley Medical Association is to be held at St. Joseph, Mo., March 18-19, 1909, and a cordial invitation is extended to the members of this Association to attend.

F. H. CLARK,
Secretary.

BOOK REVIEWS

A TEXT BOOK OF GENERAL BACTERIOLOGY.

A Text Book of General Bacteriology. By Edwin O. Jordan, Pr. D., Professor of Bacteriology in the University of Chicago and Rush Medical College. Octavo 557 pages, illustrated. Philadelphia and London W. B. Saunders Company, 1908. Cloth, $3.00 net.

This little work is the outgrowth of a series of lectures delivered by the author to the students of the University of Chicago during the last few years, and is what might be termed an epitome of general Bacteriology and does not pretend to go into an exhaustive study of all phases of the subject, but there is enough to make the work very interesting and of much value to the general practitioner.

DISEASES OF THE SKIN AND THE ERUPTIVE FEVERS.

Diseases of the Skin and Eruptive Fevers. By J. Frank Schamberg, M. D., Professor of Dermatology and Infectious Eruption Diseases in the Philadelphia Polytechnic and College for Graduates in Medicine. Octavo of 534 pages, illustrated. Philadelphia and London. B. B. Saunders Company, 1908. Cloth, $3.00 net.

This is a handy little work, profusely illustrated. It is divided into nine different classes of skin diseases such as Anemias, Hyperemais, Exudationes, Hyperdrophies, etc., and in addition to these is a section on the eruption fevers, the skin manifestations of which are very extensively described. The work will make a valuable addition to the library of the busy practitioner.

XUM

ANNOUNCEMENTS.

Fifth annual Conference of the Council on Medical Education of the American Medical Association, to be held in the pralor on the second floor of the Auditorium Hotel, Chicago, Monday, April 5, 1909.

PROGRAM.

10 A. M.—MORNING SESSION

Address of the Chairman.

Dr. Arthur Dean Bevan, Chicago.

Report of the Secretary.

Dr. N. P. Colwell, Chicago.

Report of Committee on Medical Curriculum.

1. Anatomy, including Histology and Embryology—Dr. Charles R. Bardeen, Professor of Anatomy, University of Wisconsin, College of Medicine, Madison, Wis.
2. Physiology and Physiologic Chemistry—Dr. Elias P. Lyon, Professor of Physiology, St. Louis University, School of Medicine, St. Louis.
3. Pathology and Bacteriology—Dr. William T. Councilman, Professor of Pathology, Harvard Medical School, 240 Logan Ave., Boston.
4. Pharmacology, Toxicology and Therapeutics—Dr. Torald Sollmann, Professor of Pharmacoloyg and Materia Medica, Pharmacologic Laboratory, Western Reserve University, Medical Department, Cleveland, O.
5. Medicine, including Pediatrics and Nervous and Mental Diseases—Dr. George Dock, Professor of Medicine, Tulane University of Louisiana, New Orleans.
6. Surgery: General and Special—Dr. Charles H. Frazier, Professor of Clinical Surgery, University of Pennsylvania, Department of Medicine, Philadelphia.
7. Obstetrics and Genecology—Dr. Joseph B. DeLee, Professor of Obstetrics, Northwestern University Medical School, Chicago.
8. Diseases of the Eye, Ear Nose and Throat—Dr. George E. deSchweinitz, Professor of Ophthalmology, University of Pennsylvania, Department of Medicine, Philadelphia.
9. Dermatology and Veneral Diseases—Dr. William A. Pusey, Professor of Dermatology and Clinical Dermatology, College of Physicians and Surgeons, Chicago.
10. Hygiene, Medical Jurisprudence and Medical Economics—Dr. F. F. Wesbrook, Professor of Pathology and Bacteriology, University of Minnesota, College of Medicine, Minneapolis.

2 P. M.—AFTERNOON SESSION.

Some Results of Higher Standards of Preliminary Education — Dr. Richard H. Whitehead, Dean of the Department of Medicine of the University of Virginia, Charlottesville.

Discussion.

The Character of the State Medical License Examination—Dr. Fleming Carrow, Member of the State Board of Registration in Medicine of Michigan, Detroit.

Discussion.

TEXAS.

NOTICE OF EXAMINATION.

The regular semi-annual examination of the Texas State Board of Medical Examiners will be held in Cleburne, Cleburne High School building, June 22, 23 and 24, 1909. All applicants should be present at 9 a. m., Tuesday, June 22.

Schedule of Examinations:

Tuesday—9 to 10 a. m., inspection of diplomas; 10 to 12 m., anatomy, ten questions; 1:45 to 3:45 p. m., Bacteriology, ten questions; 4 to 6 p. m., Chemistry, ten question; 8 to 10 p. m., Gynecology, ten questions.

Wednesday—8 to 10 a. m., Histology, ten questions; 10:15 a. m. to 12:15 p. m., Hygiene, ten questions; 1:45 to 3:45 p. m., Medical Jurisprudence, ten questions; 4 to 6 p. m., Obstetrics, ten questions.

Thursday—8 to 10 a. m., Physiology, ten questions; 10:15 a. m. to 12:15 p.

m., Pathology, ten questions; 1:45 to 3:45 p. m., Physical Diagnosis, ten questions; 4 to 6 p. m. Surgery, ten questions.

Total, 120 questions.

The order of exaimnation cannot be vairied from in any respect, and every applicant who desires to be examined must commence the examination on the morning of Tuesday, June 22. No person will be exanined on June 22 except those who have made proper application on the blank forms issued by the State Board of Medical Examiners, and have paid fee on or before June 10. The fee paid will be returned the person unable to appear for examination. But, unless the applicant is prevented by illness from taking the examniation he shall forfeit the sum of $2.00 for the fee paid to defray the expense incurred in arranging for his examination. Applicants are requested to provide themselves with paper 8½x11 and envelopes 4⅛x9½ inches in size, in which to enclose each paper when finished. The applicantion and fee must be sent to the Secretary at Honey Grove. The applicant must present his diploma for inspection at the examination. The filing of an application or the taking of the examination does not entitle applicant to practice, the only legal authority being a certificate from the State Board of Medical Examiners, recorded in the district clerk's office of county of residence.

M. E. DANIEL, M. D.
Secretary and Treasurer.

AMERICAN PARTY, SIXTEENTH INTERNATIONAL MEDICAL CONGRESS.—As a large number of American physicians will attend the Sixteenth International Medical Congress to be held in Budapesth, Hungary, August 29th to September 4th, 1909, the following itineraries have been arranged to be made with the maximum of comfort and enjoyment at fixed inclusive rates: Tour A provides for a direct trip, with short trips to Paris, Berlin, Munich, and Vienne, with carriage drives, visits to the hospitals, etc., in addition to a stay in Budapesth during the session of Congress, with return to Berlin and Hamburg (41 days, $395, including hotel and all expenses). Sail from New York August 12, by North German Lloyd S. S. "Bremen." Tour B presents an opportunity of combining a visit to Great Britain, Paris and some of the points of scenic interest in Switzerland, with the opportunity of returning direct from Budapesth to New York (60 days, $540, all expenses). Sail from New York July 24th, by White Star liner "Arabic."

The business arrangements of the tour have been placed, as before, in the hands of Thos. Cook & Son, the well-known tourist agents, which insures perfect and complete service for the trip, and relieves passengers from all troublesome details incident to foreign travel. Those delegates who attended the last meetings in Madrid and Lisbon will remember the excellent service afforded them. Rooms have been specially reserved at Hotel Hungaria, Budapesth, for this party, but as the number is necessarily limited, we would advise those contemplating the trip, tc book at once and secure accommodations. Fo rfurther information and copy of itineraries, apply to Chas. Wood Fassett, M. D., Krug Park Place, St. Joseph, Missouri.

DIDN'T WANT THE JOB

During a recent examination of applicants for the position of mail carrier, a colored boy appeared before the civil service commission.

"How far is it from this earth to the moon?" was the first question asked him.

"How fah am it from de earf to de moon?" he repeated as he began to reach for his hat. "Say boss, if you's gwine to put me on that route, I doesn't want de job;" and with that he left as though he were escaping from calamity.—Circle Magazine.

HER OPPORTUNITY

Jose, a bright six-year-old boy listened very intently while his mama on showing his new Norfolk suit which she had just finished, explained that she had never bought him a suit; she had made them. Jose was very quiet for a few moments, then said:

"It's a great thing for a woman to have children so she can sew."—The Delineator.

XUM

EXCHANGES

THE CARE OF THE RHEUMATIC CHILD.

(By Le Grand Kerr, M. D.)

The insuring of the normal development of the child is very important and in the presence of disease or of its probable occurrence, prophylactic measures become a necessity. It is freely admitted in the case of the rheumatic child, that preventive measures offer a splendid field for endeavor while the child is ill, and that by such measures serious complications may often be avoided or limited, but while the child is in a state of health is there any scheme of prophylaxis which is of benefit?

The answer to this question would depend upon whether we considered rheumatism in the child as an infection or dependent upon a diathesis. The general tendency at this time is to regard it as an acute infectious disease. Particularly in children is the resemblance to the infections marked enough to demand serious consideration. Several investigators have described diplococci which have been recovered at an autopsy from the heart's blood (Bouchard, Guttman), the endocardial vegetations, pleural and pericardial exudates, and the synovial membranes of the joints (Hlava) in cases of rheumatic fever.

Inoculations with these may produce various lesions, such as multiple neuritis, endocarditis, pericarditis and pleurisy. The diplococci are however, not distinguishable morphologically or by culture as peculiar. Cole showed quite conclusively that these results were common as the result of inoculations with streptococci obtained from various sources. It is probable that further investigations will show that not one, but several micro-organisms are the exciting agents in a susceptible child.

malignant disease or rupture of a supporting

There is a marked tendency in these days when laboratory experimentation has been so brilliant in its results and has achieved so much, to belittle the influence of those things which we previously deduced by other means of investigation. And so, since the search for the causative factor of rheumatism by laboratory methods there has been a growing inclination to disregard the influence of other factors—notably a diathesis favorable to the development of rheumatism.

We must admit from a study of the disease that there is much about it to indicate its infectious nature, but even in the presence of an organism which may finally be definitely isolated or a number of such, there is no good reason for denying the existence of a favoring diathesis. That there is a specific microorganism which will finally be isolated I have but little doubt; that there is a diathesis—a congenital condition of the system which renders it particularly liable to the development of rheumatism, I have none. There is in all probability the seed but there is also the necessity of a soil favorable to some extent to the seed's development.

The laboratory investigator studies all cases upon somewhat of an experimental basis, ferreting out the laws of injurious effect which harmful agents have upon all members of so? ciety. He is unable by this method to explain the cause of every disease. The disease may be produced by conditions which are not at all general, therefore we are often forced to the conclusion that there exists a casual factor in the individual which is not common to all members of society.

Recognition of a diathesis presupposes that appropriate measures will be instituted to prevent the disease which such a diathesis favors. The chief object in the recognition of this diathesis in the child is the prevention of cardio vascular changes. Before these occur, there are present a multiplicity of symptoms which when recognized are danger signals.

A child who has a rheumatic parent is very liable to develop the disease, and if both parents are rheumatic, the liability becomes almost a certainty.

We cannot affaord to overlook this influence and therefore a careful taking of the family history becomes a necessity. Parents may deny having had rheumatism, and yet when pressed further will admit the existence of one or more of the nonarticular manifestations of the disease, although these are not recognized by them as rheumatic. There is always danger of overlooking these if the history-taking is hurried.

Then having satisfied ourselves that the child has a rheumatic tendency, it is incumbent that the defensive arrangements of the

body be put into the best possible condition. As regards the development of rheumatism in the child, what are these defensive arrangements?

First, there is the resistent power of epithelium. Lister showed long ago that where the epithelium lining a canal whose sides are normally in contact, remains healthy, bacteria are powerless to spread along that canal. There is reason to believe that this power of resistance differs at times in the same individual.

Second, after having gained access to the blood-stream, it is essential for the growth of most infective agents that they find rest. Therefore, it is reasonable to suppose that they are favored when a break or weak spot is found in the endothelium. A healthy endothelium would, on the other hand, limit their growth.

Third, there must be perfect elimination. This would entail that the condition of health be such that the functions of the bowels, the kidneys, and the skin be perfectly performed.

Fourth, that there be no part or organ of the body which is in such a condition as to invite infection or favor the growth of organisms. And this applies with special force to the tonsils.

Fifth, quite apart from the agents which are actively engaged in the destruction of infective micro-organisms in the body, there is every reason to acknowledge that there exists an indefinite something which might, for want of a better term, be called "recuperative power." This power must act through the course of the infection as well as after its subsidence.

The first three defensive arrangements are intimately associated with a co-ordination and co-operation of all parts; a carrying on of the intricate, ye tcorrelated functions of each organ freely and without pain. In other words, there must be a state of health. This must be conserved.

The fourth demands the treatment or removal of such areas as continually invite infection. Therefore, the demand becomes insistene that diseased tonsils and adenoid vegetations receive early and adequate attention in rheumatic children.

The fifth defensive arrangement, or the recuperative power of the individual is as far as we know a combination of temperatment (that something which we all recognize and as yet are unable to explain) and of perfect health. The temperament we cannot influence; the state of health we can.

We must all recognize that there are in children certain initial manifestations of rheumatism and in the ferreting out of these and giving them their proper values, we are doing an important work in the limiting of the disease.

I shall mention these, as in my experience they have been important; and the first, because the most common, initial manifestation is::

Tonsillitis.—Not every tonsillitis is of rheumatic origin but fully one-third of the cases are of such genesis. In what other way can we explain the marked frequency of the initial sore throat of rheumatism. In all of the cases of undoubted rheumatism in children which I have had an opportunity of studying, tonsillitis was the earliest manifestation in 39 per cent. In nearly all .nstances it preceded other manifestations by somewhat less than one year.

The type of the inflammation has some bearing. In a large proportion of cases the subacute type held first place; the chronic variety second, and the suppurative type was least prominent.

The indication for treatment is clear. All covered cryptal tonsillar tissue must be removed and that entails complete ablation. If it is the first attack, or if the crypts are not obstructed, tonsillotomy as ordinary done is sufficient. Adenoid vegetations which are usually associated with subacute or chronic tonsillitis must also be removed.

Pain in the chest and exertional dyspnea (irrespective of disease of the heart) was in initial manifestation in 11 per cent., and in most instances was marked enough to attract the attention of the parents without suggestion. In this connection anemic murmurs were common. In such instances the indications are for the administration of a tonic containing iron. Abundance of fresh air should be provided day and night.

Chorea manifested itself as the initial symptom in 9 per cent. of the cases and was severe in but one instance. Now when chorea is once established there is a distinct predisposition in that child to recurrence. And the recurrences are brought about by causes which would not affect a child who had never peviously been attacked. Therefore, the same care and restraint must be placed upon such a child as would be used in any markedly neurotic subject.

XUM

So-called "growing pains" or myalgia was present in but 4 per cent. of the cases as an initial manifestation. Much has been written about the "growing pains" fallacy and this may have led some to believe that myalgia is almost a positive sign of rheumatism and that its absence indicates the absence of the disease. This error must be corrected. Myalgia is a very common accompaniment of all of the infections in children and is readily induced by over-exertion. Therefore one of the "growing pains" fallacies has been its over-estimation. The peculiarity of a rheumatic myalgia is this: that it is as severe at one hour of the day as at another; it occurs independently of exertion, and is a late manifestation of rheumatism instead of an early one.

The manner in which children are clothed is often the cause of myalgias which are called growing pains. For instance the exposure of a child's limbs in cold weather satisfies the esthetic taste of the mother, but is harmful. We cannot always modify the dictates of fashion, but we need not sanction them.

Torticollis and subcutaneous nodules might well be considered in the same way. They are rarities and may occur among the early signs of the disease but are never initial manifestations.

Pleurisy and frequent attacks of bronchitis are all quite frequent accompaniments of rheumatism but not as initial symptoms. Their common association with the disease must suggest its possible existence as an etiological factor and thereby would indicate the appropriate treatment.

Epistaxis and enuresis might suggest the possibility of rheumatism, if they were persistent and other causes excluded. Often in these instances a carefully taken history will reveal other manifestations of rheumatusm which were not suspected.

Erythemas must arouse a suspicion as to a rheumatic origin.

Have we been too ready to accept the foregoing manifestations as being rheumatic? We are not yet in a position to definitely define rheumatism as it occurs in childhood, therefore our methods of diagnosis must be less exact than actual demonstration. But when we find these individual facts so prominently associated with cardiovascular changes which have no other demonstable etiology than rheumatism, we may be confident in the diagnosis of individual cases. When we are satisfied or even suspicious that any of these symptoms and phenomena are the initial manifestations of rheumatism the treatment must include the treatment of that disease.

Our aim must be to limit the possible serious consequences of a well-advanced disease. It is not necessary or wise to wait for articular developments. The time to treat rheumatism successfully, in children, is when any clinical manifestation backed up by a positive family history makes us suspicion of the tendency to the disease.

I have emphasized the importance of the earliest recognition of these manifestations because without such there could be no appropriate treatment or care of the child. Every known means must be adopted to prevent their recurrence. I have purposely left the consideration of the joint involvement as an initial manifestation until this point.

Joint involvement was the initial manifestation in 31 per cent. The prominent feature is for a certain joint to be involved for a few hours and rarely for a period of over three days. This involvement of the points ushers in what is commonely called acute articular rheumatism. Very few points are attacked, and it is the larger ones which seem to suffer most, so that the knee, the ankle and wrists are most frequently involved. The slight amount of pain and swelling may delay the diagnosis and also the treatment.

Now when active symptoms are present, the treatment and care of the child must be rigorous. There are several indications; these are etiological, pathological and clinical.

The etiological indications are:

(a) Absolute rest, both mental and physical. This means that the child must be in the recumbent position and allowed to make little exertion. To secure mental quietude visitors must be excluded and old toys used and old stories told. The administration of sedatives is permissible and often effective in its result.

(b) The advoidance of solid food for a few days and the absolute abstinence from all meats or meat extracts for several days. Sugar must also be restricted to the lowest possible amount or saccharin used in its stead. All foods which are rich in proteid should be restricted. I never allow the use of whole milk but advise the use of the top pint (cream) diluted with an equal part of water. Such dilution reduces the proteid and favors elimination, particularly by the kidneys. Ripe fruits

are allowed, also the fruit juices. When cereals are given they are well dextrinized.

The pathological indications are:

(a) To combat the inflammation in the joints. This may be done by the stimulation of the cutaneous circulation. Along this line, the hot-blanket pack and hot fomentations are used until the temperature falls or the acute pain is relieved.

(b) To limit or prevent an extension to the heart, lungs, pleura or meninges. Here is the place for elimination. Skin, kidneys and bowel must be kept active. Warm baths followed by cool sponging or friction over the parts of the body free from inflammation will be useful. Hot enemas are often very efficient. As a rule I have given them once every twelve hours for two or three days. Here again it is necessary to lay special emphasis upon the value of absolute rest. Free water-drinking should be encouraged.

The clinical indications are:

(a) Hyperpyrexia.—This may be treated by the use of an ice cap and sponging with tepid water accompanied by mild friction and no drying. Unless the temperature rises above 102 degrees F., it may be disregarded as an indication for direct treatment.

(b) Pain in the Joints.—Rest, and the local applications already mentioned will relieve and particularly if the joint be smeared with some oil twice daily.

(c) To Limit Damage to the Joints.—Gentle or simple flexion of the joints as soon a sthe temperature has subsided will limit permanent damage.

(d) Tachycardia.—When this occurs there should be applied over the heart, a cold compress for at least fifteen minutes of every hour or an ice bag may be used in its stead. Small doses of the bromides are grateful as the child is usually in a very nervous state.

(e) Profuse Perspiration.—If this occurs during the first few days it should not be checked but the little one should be wiped dry as frequently as it occurs. Occurring later in the disease it may be gradually stopped by a bath with a tepid temperature at first, which is gradually reduced to about 85 degrees F. This may be used twice daily.

(f) Anemia and Debility.—When Convalescence is once fairly established the use of tonics is indicated. Every rheumatic child suffers more or less from blood impoverishment. In the very acute cases anemia is so severe and sudden that the demand for treatment is urgent. I am quite in favor of an early though gradual return to the usual diet, and it is my habit to proceed as follows: After the restrictions as indicated previously, when the temperature touches normal, I begin the use of legumes, undextrinized cereals and some dried vegetables, as peas, beans and lentils. Baked potatoes and eggs are allowed the next day and also fish. Within ten days after the subsidence of an acute attack the diet is liberal and meat is allowed once daily. I believe that it is the most important that we give to the convalescent child a diet which is as nutritious as possible and no doubt much of our prolonged convalescence was formerly due to the restriction of the diet for weeks after an attack. My reasons for this are given later on. Sugar seems to be the most harmful article and its us eis always restricted irrespective of the prevailing condition.

The salicylates occupy a well deserved place in the treatment of rheumatism. They are palliative however, and for the time overcome or modify the rheumatic manifestations. Their use cannot be long continued in children because of their prompt tendency to disturb the digestion. Salicin is less objectionable than the salicylate of soda and can be readily given in the dose of one grain for each year of the child's age and repeated every three hours. A reduction in the temperature and in the signs of inflammation in the joints is an indication for the reduction and somewhat rapid withdrawal of this class of medication. Aspirin has a weak but rather prolonged action a san analgesic in rheumatism and its chief indications is those cases in which the salicylates are beneficial and after the acute pain has been relieved by other means. But the pain of acute rheumatism in children is so insignificant, as a rule, that no internal analgesic is indicated.

Along with the administration of the salicylates or immediately following the discontinuance of their use, bicarbonate of soda should be given. Its use must, however, be kept up for a long time (four to six weeks) although in steadily decreasing doses.

Can anything be done to limit or prevent the development of cardiovascular changes in a child who has rheumatic proclivity or who has suffered from an acute attack of the disease or one of its initial manifestations.

It is hardly necessary to review before a society of this kind the frequency with which all

rheumatic manifestations are accompanied by cardiac changes. The experience which each one can recall of one fatal case can be repeated and repeated so that such an experience is constantly recurring, and there are serious consequences of such an occurrence. Immediately the heart becomes involved we are confronted with the probability that the life of the child will be seriously affected—there must follow diminished usefulness and restricted activity. The insidiousness with which such a condition may ensue must always be borne in mind. To the lay mind there is danger to the heart in the course of rheumatism but only during the very acute stage of the disease. Unless the disease manifest itself by joint symptoms they do not realize the necessity of any special care. It is only during recent years that the profession has fully realized the importance of this phase of rheumatism in children. So marked are the influences of cardiovascular changes upon the course and outcome of the disease that it leaves one in doubt as to whether or not they should be considered as the typical characteristics of the disease.

There is the chief difference between the adult and child types of rheumatism. In the former it is expressed as an acute polyarthritis, with the symptoms all massed, while in the latter, its common occurrence is in nonarthritic forms with cardiac changes as a common manifestation and the symptoms spread over a long period, so that often the history of the disease is the history of that child's life.

There is but one known means whereby we are even reasonably certain that we are favorably influencing the possible occurrence of cardiac changes. That one means is rest, rest absolute and prolonged. To secure cooperation, the parents must be made aware of the dangers. There must be no temporizing with the patient; the case must be fairly and forcibly stated and the responsibility for an infraction of the rules placed where it belongs.

Now the necessary rest which is entailed upon the child helps to bring about a condition characterized by the retention of waste products and muscular atony. If the diet be restricted for several days to liquids the tissues undergo slight degenerative changes and waste products are more abundant. These changes occur more readily in the child suddenly deprived of its usual liberty than in one who gradually limits its activities. This is my reason for a rapid return to the proper diet. It is also one of the reasons why we might often advise a change of climate or of surroundings with benefit.

And if climatic treatment is instituted, the seashore seems to offer the most advantages to the child, although it has a close second in mountains of low altitude with few or no lakes.

And the responsibility of the physician does not end with the care and treatment of an individual case. If there are other children in that family they must be protected. The parents must be made to realize that what to them might seem a slight illness may be but the beginning of a disease which will limit the usefulness of their child, narrow its activities, or possibly result in its premature death.—42 Gats avenue, Brooklyn, N.Y., American Journal of Obstetrics.

STERILITY AND STERILIZATION.

(From Hare's Progressive Medicine, Dec. 1908)

By Wm. T. Belfield, M. D., Professor of Surgery in Rush Medical College, and of Genito-Urinary Surgery in the Chicago Polyclinic.

Delbet and Chevassu found 114 cases of azoospermia among 131 patients with inflammation of the epididymus, acute or chronic. Probably half the cases that have doubled gonorrhoeal epididymitis are left permanently sterile. Their observations confirm the statement that the testicle continues its spermatogenic function behind the occlusion of the epididymes, and that fertility may be reinstated by a restoration of the canal. They have in six cases implanted the vas into the testicle, and in another instances united the vas with the epididymis (Martin's operation.).

Pincus deplores the too frequent treating of women for sterility without examination as to the husband's fertility. He quotes Sanger's investigation of 110 sterile couples, which revealed azoospermia or impotence in nearly 50 per cent., and only 15 per cent more in which the sterility was apparently the gonorrhoeal infection of the wife.

Pincus has examined both husband and wife in 488 instances of sterile marriages. He found permanent azoospermia in 62 husbands (12.5 per cent); in 7.5 per cent more the spermatozoa were few and feeble, and in 2.6 per cent. additional the sermaptozoa were motionless. nearly one-fourth of these 488 marriages, therefore (119 cases) the husband was sterile.

While the possibility of sterility in the sub-

jects of bilateral gonorrhoeal epididymitis is generally recognized, I have been impressed with the number of sterile men personally observed in whom gonorrhoea has invaded only one epididymis, or even neither of them. These cases comprise two classes: (1) Those in which both epidymeal canals have been invaded by a mild infection proceeding from a deep urethral stricture, producing a chronic, painless induration of the epidymis, often with hydrocele; in these no spermatozoa are found in the semen; (2) cases in which the epidymes have never been affected and the semen contains abundant spermatazoa, which are, however, motionless. In some cases of this latter class, treatment of the chronically inflamed prostate and vesicles has been followed by a restoration of motility in the seprmatozoa.

The uncertainty of the influence of gonorrhoea upon fertility are well illustrated in two patients of mine who had sowed a large crop of wild oats together. One contracted gonorrhoea six times, during which each epidymis was twice invaded by infection; yet his semen contained abundant motile spermatozoa, and soon after marriage his wife conceived. The other man escaped with two attacks of gonorrhoea, which invaded the prostate and vesicles but not the epidymis. After a year of sterile marriage, an examination of his semen showed plenty of spermatozoa motionless.

STERILIZATION OF THE UNFIT BY VASECTOMY.

The urgent necessity for restricting the irresponsible propagation of criminals and others who have been judicially declared parasites on society has been officially recognized by the State of Indiana.

In March, 1907, the Indiana Legislature passed a bill authorizing the sterilization of "confirmed criminals, idiots, imbeciles, and rapists," in the state institutions of Indiana. In the prison at Jeffersonville over 300 convicts have been sterilized by vasectomy, some by authority of the state, but over 200 of them at their own request. This voluntary submission to sterilization on the part of hundreds of convicts removes the only conceivable opposition to this method of protecting society—namely, the sentimental.

Vasectomy is performed in a few minutes under cocaine anesthesia, through a skin cut less than one half inch long; it entails no wound infection, no confinement to bed: it is less serious than the extraction of a tooth. That obstruction of this tube does not impair sexuality is abundantly proved by the robust sexual health of thousands of men who have been unwittingly sterilized through bilateral epididymitis, and who never suspect their sterility until their marriages prove barren. That vasectomy itself is equally harmless to sexuality is shown by the experience of those upon whom it has bee nperformed; among these ,to my certain knowledge, are married men who took this means, rather than criminal abortion, to prevent the transmission to offspring of their own hereditary taints, such as insanity and syphilis. The sterility caused by vasectomy can be cured by a slight operation, which reunites the severed ends of the vas, should the subject desire to beget offspring. Irremediable sterility, such as is desired for the defective classes, is easily procured by removing a longer piece of the vas.

The reunion of the severed ends of the vas is easily accomplished by freshening these ends and passing a catgut or silkworm thread into the lumen of each end, out through the wall of the vas, and tying the thread ends. The thread thus serves as a splint, which keeps the ends in perfect apposition during healing. Of the many methods proposed, this one—first published by Mayo—is distinctly the best.

This journal has discussed this topic several times in its editorial columns, reference being made to the value of sterility and sterilization. We are glad to reproduce the above on account of its being a topic of general interest.—Indianapolis Medical Journal.

NON-URINARY DIAGNOSIS OF BRIGHT'S DISEASE

Allyn states that not infrequently, in his experience, the urine has given very little help in the diagnosis. It is not uncommon for the analyst in cases of chronic Bright's disease, to report the urine negative for albumin and casts. In the majority of these cases, but not in all, persistent low specific gravity of the urine directs attention to the probable diseases of the kidneys. Allyn cites cases in which the specific gravity had been well maintained, and yet extensive disease of the kidneys was found at autopsy. The result, therefore, is that chronic nephritis is often overlooked and the patient treated for heart disease anemia, or weakness and malnutrition of unknown origin. The author enumerates the extra-urinary phenomena

of this disease and states his belief that by them the disease may often be diagnosed even if the urine is negative. Cardiovascular signs of this disease are probably the most constant and important. They consist briefly in enlargement of the heart, particularly the left ventricle, in accentuation of the aortic second sound, in raised blood pressure, thickening of the walls of the artery, and in such phenomena as dizziness, headache, hemorrhage and malnutrition. Rise in blood pressure is very common in chronic Bright's disease. Generally it can be perceived by the finger, if the physician has considerable practice in feeling pulse. Allyn refers to 130 cases reported by Janeway in which the systolic pressure, recorded by the sphygmomanometer was 200 mm. or more and in all but ten or fifteen per cent. there was chronic nephritis. Thickening of the blood vessels is another frequent symptom; the amount of thickening varies greatly and does not always bear a direct relation to the gravity of the nephritis. Enlargement of the left ventricle is easily made out. The apex beat instead of being within the nipple line is displaced to the left so as to be flush with the nipple line and beyond it; at the same time it is displaced more or less downward. Other cardiovascular phenomena are hemorrhages, which may take place in the skin, kidneys, stomach or bowels. Hematuria occurs occasionally especially in the gouty form of nephritis, when there is arteriosclerosis of the kidney vessels. Albuminuric retinitis and detachment of the retina occur in a number of cases, the former being more frequent. Sometimes eye changes indicating nephritis are found before the family physician has any suspicion that disease of the kidneys exists. Other symptoms are dizziness and vertigo, which may occur as symptoms of disturbed cerebral circulation, as the result of toxemia. Nutritional changes are characterized chiefly by loss of strength and infrequently by nausea, vomiting, painful digestion and attacks of diarrhea, without adequate cause. In toxic phenomena he cites such symptoms as headache, insomnia, delirium, coma, convulsions and hemiplegia, and bronchicial and pulmonary symptoms such as dyspnea, bronchitis and edema of the lungs. He states also that he has seen several cases of peripheral neuritis, in one which there were recurring attacks of gastralgia associated with anacidity. —J. A. M. A.

PROFESSIONAL SECRECY AND PROFESSIONAL DUTY

An editorial article in the St. Louis Medical Review for February, entitled Moral Obligation vs. Legal Restriction, recounts the case of a young girl who presented herself at a clinic for treatment for acute iritis. "She had," says the account, "a typical, pronounced secondary syphilitic eruption with accompanying sore throat and mucous patches. She admitted knowledge of the character of her affliction and yet persisted in retaining her position as housemaid, including the care of two small children." The writer of the article bewails the legal inability of the physician to warn the family in which this young woman was employed of the danger by them continuing her in her work.

Now, Mr. Arthur N. Taylor, in his excellent book entitled, "The Law in its Relations to Physicians," says: "It seems well settled that this clause (that 'one practising medicine and surgery shall not be permitted to disclose "any information which he acquired in attending a patient in a professional capacity" ') in the statutes includes all knowledge gained in the professional intercourse of a physician with his patient, whether obtained from statements made to him by the patient or gained from observing and examining the patient." Mr. Taylor undoubtedly states the court rulings correctly but we doubt if they would be upheld in such a case as our St. Louis contemporary depicts.

We must assume that the law aims at justice, but where is the justice of a judicial ruling that a certain legislative enactment forbids a man to warn another man of grave danger to his family if he continues to employ a conscienceless servant girl who is perfectly willing to run the risk of giving syphilis to his children? We doubt if any jury would fail to exonerate a medical man who should give such a warning, statute or no statute. The matter lies at the base of our social institutions. As well might physicians be forbidden to accuse a certain microbe of deleterious operations. Surely the meaning of the laws is not to give freedom to the scatterers of infective disease. If it is, the sooner we know it the better. We can then agitate for a highly modification of the statutes.—New York Medical Journal.

EXOPHTHALMIC GOITER

Dr. Emile Schmoll, San Francisco: I have here a man with exophthalmic goiter. When the patient first consulted me he presented the following symptoms: There was tachycardia and the legs were edematous up to the abdomen. There was enormous tumefaction of the liver, which reached below the umbilicus, and was pulsating. The pulse was 160, and irregular. There was dilatation of the heart, the apex beat reached to the left auxiliary line, the right side being 3 cm. outside the right sternal border. There was enlargement of the thyroid on both sides; the gland was soft to the touch and was pulsating. The circumference of the neck was 16 1-2 inches. There were very pronounced exophthalmos. In view of the critical condition of the heart and the mitral and tricuspid insufficiently, it was thought that surgical interference was impossible or that before such question could be decided the circulatory symptoms must be improved. Furthermore in my opinion, the presence of an enlarged thymus behind the upper part of the sternum, spoke against surgical intervention. Deaths on the operating table or following within twenty-four hours after operation have shown that in the majority of these cases of exophthalmic goiter there is a persistent thymus. Garry, of Bonn, consideres that dulness behind the upper part of the sternum contraindicates operative interference. It was decided, therefore, to treat this patient internally, and he was put on complete rest and digitalis. He responded very quickly. The amount of urine began to increase on the second day, and on the fifth or sixth day the edema had completely disappeared. The liver had diminished considerably to about 1cm. below the costal border, and the acute dilatation of the heart had disappeared. However at this time, while the tachycardia had been controlled by the digitalis, the goiter did not show any change and the exopthalmus did not retrocede, while the nervous symptoms had become excessive. On one evening the man even presented an attack of acute mania; it was impossible to reason with him and large doses of morphia were needed to quiet him. It was then decided to try a line of treatment which I have followed in several other cases with good results: meat was excluded from the diet. The amount of albumin and nitrogenous food was reduced to the minimal amount with corresponding carbohydrates and fat. I gave food which contained about 70 grams of albumin and about 3,000 calories which was more than needed, and the man began to gain rapidly. At the beginning I gave him sodium phosphate, but could not see any improvement. I then gave one-half a grain of sodium iodid twice a day. Under this treatment the pulse came down to about 70 a minute, still remaining irregular; the heart, however, was fully compensated. The goiter began to show improvement after three or four days; it became harder, losing its pulsating character, and the exophthalmos retroceded. After this treatment had been carried out for several weeks, the circumference of the neck was reduced to 15 1-4 inches and the exophthalmos was still retroceding; it is, however, still noticeable. Lately the pulse had gone up again. There is no sign of cardiac insufficiency. The nervousness has almost completely disappeared and the patient has gained about twenty pounds in weight.

My standpoint has been that in every case of exophthalmic goiter internal treatment ought to be tried. If within two months there is no improvement the case ought to be turned over to the surgeon. As an indication as to whether improvement is obtained, I especially consider the weight of the patient. If the individual increases in weight and the nervous symptoms are controlled, I consider the case to be progressing favorably and to present a favorable outlook for internal treatment. If, however, the patient loses weight, surgical treatment should be instituted. In this case the pulse has remained irregular.

DISCUSSION

Dr. W. I. Terry, San Francisco: Every patient with exophthalmic goiter should be under medical treatment for a short time, and if no improvement is obtained, surgical interference should be considered. Some of these patients respond promptly to medical treatment. I think some of the edema and heart symptoms and the liver condition were probably due to a preceding typhoid. This goiter came on immediately after an attack of typhoid, which may have weakened the heart muscle to a considerable degree. Dr. Schmoll has also improved the exophthalmos, but he had not cured it, nor can he expect either by surgical or medical means to cure an exophthalmos when it is so pronounced. The question of relapse in these cases is to bethought of. This man will have to be followed up for some time; he may relapse, and if he does a thyroidectomy will be indicated.

The operation should certainly be done before the heart muscle gives out and before the man has the typical extreme symptoms of exophthalmic goiter.

Dr. W. W. Kerr, San Francisco: Like other medical men I am always glad to hear of something that gives us more hope than we have had before in the treatment of exophthalmic goiter. Many cases are inoperable, more especially in women, who suffer from a great deal of circulatory disturbance, and with whom the question of operation sometimes cannot be considered. The use of digitalis I have never found saticfactory; sometimes one can alleviate the disturbance, but there are never results which give one confidence to persist in its use. Sometimes there is improvement when the patient has led an active life and has strained the heart, and in that case there might be restored compensation. The use of iodid has not been successful in my hands. I generally use it in doses of from 5 to 10 grains, giving from 15 to 30 grains in a day, and have never seen any good come from it. In most cases the disease was more agrivated than benefited by it. I may have been at fault for giving such large doses.

Dr. Emile Schmoll, San Francisco: In this case I have not had an occasion to use anything so far as the circulation was concerned, because the pulse immediately fell after the use of digitalis to 80. I agree with Dr. Kerr that digitalis is useless unless one has to deal with myocardial insufficiency. Again, with rapid pulse digitalis is often dangerous and should be advocated only in cases in which there is decided myocaridial insufficiency and in which there is edema and enlargement of tne liver.—J. A. M. A.

INDURATIVE HEADACHE

Dr. N. S. Yawger: Indurative headache is of organic orgin, chronic and usually paroxysmal occurring in various parts of the head, and due to deposits or infiltrations at different points, chiefly in the muscles of the head and neck. The disease has been recognized for years abroad, notably in Sweden and Germany. Edinger states that is probably the most frequent form of organic headache. This condition is sometimes called cephalalgia, cephalodynia, migraine, hemicrania, cranial neuralgia or neuritis, and seems to be due to a deposition at the insertions or within the bodies of the muscels of the head and neck. It comes and goes at first and later becomes chronic, and when the chronic condition is present a headache may be brought on by fatigue, bad air, chilly and rainy weather. In the latter case it is sufficient to get within the outer limits of storm conditions and not necessarily within the area of rainfall. Attacks are most frequent in the fall and spring. It seems likely that the condition is due to an excess of uric acid or an allied substance and the subjects are often neurasthenic. The depositions are found present in three stages: (1) Swelling. (2) resistance, (3) induration. The longer they exist the firmer they become and the more resistance they offer to treatment. During the attack, fever and redness are absent. All cases of headache should be examined by forcible flexion and twisting of the neck which will bring out pain at the sites of these depositions in the back of the head and neck. Examination can be made to best advantage during a paroxysm because the swelling and sensitiveness are then greater. The scalp should be thoroughly palpated for thickenings, irregularities, indurations and nodules. Points of hypersensitiveness are frequently found in the trapezius, scaleni, splenii, and sternomastoid muscles along the base of the scalp and adjacent parts of the neck, on the spinous processes of the upper cervical vertebrae, and in the temporal and suproorbital regions. Other sites of invasions of these deposits are the inner side of the knee, the inner and outer aspect of the ankle, and within the bodies of the deltoid and abdominal muscles. Cases have been mistaken for meningitis, appendicitis, or sciatica. The picture presented by lumbago is strikingly similar, inasmuch as it may become chronic and offer resistance to palpation, it is relieved by pressure, there is an absence of fever and redness, and it yields to the same treatment. Persons having a tendency to these depositions should drink an abundanec of water between meals, avoid fatigue, take outdoor exercise, and if the condition is later proven to be due to an excess of uric acid or an allied subject, the diet should contain a small percentage of purins. For a severe acute attack it is wise to give a purgative, a hot bath, apply hot dry applications locally and give repeated large doses of sodium salicylate or aspirin, or salophen internally.—J. A. M. A.

ARSENIC IN CUTANEOUS THERAPY.

Dr. A. J. Markley, in the Lancet-Clinic, says that arsenic has long held a leading position among medicinal agents employed in the treatment of diseases of the skin; is often considered as a specific for any and all such disordered conditions, and is much too often administered regardless of indications and without definite knowledge of what it is intended or supposed to do.

Although arsenic is the only known drug proven to have a definite effect upon epithelial structures, there is, notwithstanding, a growing belief among dermatologists that it is of real value in the treatment of relatively few diseases of the skin, and such benefit as is usually credited to it is due rather to its general tonic and alterative properties than to any direct influence upon pathological conditions in the skin itself.

J. F. Sscamberg, in an article on this subject (Therapeutic Gazette, vol. xxxii, No. 6.), gives reasons for the very general faith in the efficacy of arsenic; emphasizes the very few diseases in which it is really useful, and points out certain dangers attendant on its continuous and indiscriminate administration.

"It has long been alleged that arsenic-eating, among those addicted to the habit, caused a great improvement in the complexions and in the texture and fineness of the skins of the women, and likewise that white arsenic is mixed with the food of horses to make their coats sleek and glossy. Arsenic has been shown by laboratory experiment to cause defininte changes in the skin of the frog; and in a recent epidemic of poison from contaminated beer there were observed, not alone serious and numerous disturbances of the skin, but arsenic was detected in the desquamated epithelium.

"Arsenic finds its field of greatest usefulness in psorias, pemphigus, and ichen planus.

"Psoriasis.—In a certain number of cases it exerts a beneficial influence. In many cases it fails completely , is contraindicated during development of acute eruptions, and always where there is gastric disturbance; such conditions constituting general contra-indications to its use in skin diseases.

"Pemphigus.—In the pemphigus of children arsenic acts at times like a specific, but in the chronic relapsing form of adults rarely does good.

"For lichen planus arsenic was long regarded as specific, and is frequently of value in later stages of some cases. It is now, in a measure, superseded by other remedies, particularly mercury and the salicylates. In acute cases the salicylates exert a more rapid control over the intense pruritus, and frequently cause a complete regression of the eruption.

"In acne it is less useful than in any other dermatosis, is far more prone to do harm than good. Gastro-enteritis often results from large doses, with aggravation of the acne.

"In recurrent vesicular eczema it is at times of value, and in some squamous and papular cases where there is lowering of general nerve tone. As generally employed, however, it works more harm than good in eczema.

"Another fact not adequately recognized is that arsenic in large doses, or in small doses for prolonged periods may exert a noxious effect upon the skin and other important structures.

"In the contaminated beer epidemic in England, in 1900, the readiness with which arsenic produces multiple neuritis was shown. Cutaneous manifestations were also numerous and varied. The most characteristic is generalized pigmentation. A case is cited in which a well-preserved man of seventy-one took in a month about 400 minims of Fowler's solution, which resulted in rapidly developed brownish pigmentation involving the greater part of the body.

"Another characteristic symptom is overgrowth of the horny layer of palms and soles, hyperkeratosis, at times becoming warty and in rare instances eventuating in cancer. Attention was called to this danger years ago by Jonathan Hutchinson."

CONCLUSIONS.

"1. Arsenic is a drug of undoubted value in a limited number of skin diseases, but often fails to realize one's expectations. May accomplish some incidental good when indicated by the condition of the nervous system.

"2. Arsenic is used excessively and indiscriminately by the general practitioner, while the specialist is inclined to withhold it unless specially indicated.

"3. When used in too large doses or over protracted periods, it may produce structural changes in the nerves.

"4. Not only are inflammatory dermatoses commonly aggravated by its use, but a great variety of skin disturbances may result from

toxic doses—pigmentation, hyperkeratosis and even cancer.

"5. In view of these possible dangers much care should be exercised in prescribing arsenic. Not at all unless there is some clear indication, and particularly should patients be instructed not to continue its use upon their own judgment."

REPLACING DISEASED ARTERIES WITH HEALTHY ONES.

At a meeting of the American Philosophical Society in Philadelphia recently, Dr. Alexis Carrel, of the Rockefeller Institute, New York, described experiments which would lead to the conclusion that hereafter diseased arteries and even organs in man can be successfully replaced by sound arteries and organs taken from dead persons. Of course, the difficulty would be to find a healthy organ with which to replace the diseased one, and the danger of introducing some infection from without.

"In my experiments to preserve arteries," said Dr. Carrel, "I found that dessication would not do, but produced a state of absolute death. Then I put the arteries in refrigerators and left them enclosed in hermetically sealed tubes, at a temperature a little above freezing. I found that an artery could be kept alive for sixty days, and substituted for the artery of a living animal. I have replaced the abdominal arteries of a cat with the carotid arteries of a dog. Once ,when I received a human leg from a New York hospital, I kept the arteries twenty-four days and then put them into a dog. The dog easily survived the operation and remained healthy, and when etherized some months later and the leg re-opened, the human arteries were found to be doing beautifully."

Dr. Carrel showed on the screen a fox terrier frisking about after having had grafted on the stump of his leg the leg of a dead dog; and how kidneys, glands, and veins had been shifted between animals with the same permanent success. Dr. W. W. Keen related how, in a case abroad of ankylosed knee joint, the diseased parts had been cut out and a normal part substituted from the leg of a man who had been killed in an accident. The man can now walk with ease and even kick.—Post Graduate, Dec. 1908.

EARLY THYROID DISEASE.

British Medical Journal.

Murray draws attention to some of the signs of early disease of the thyreoid gland. The symptoms may be local and mechanical from simple enlargement of the thyroid, or constitutional from variations in the functional activity of the gland induced by the structural changes which occur in it. As the function of the thyroid gland is to supply an internal secretion which escapes by the way of the lymphatics into the blood stream, by which it is distributed to all parts of the body, disease of the thyroid gland may be divided into three classes, according to the manner in which this function of the gland is influenced by them. Class 1. Diseases having no appreciable effect upon the secretory function of the gland, such as uncomplicated acute thyroiditis, simple parenchymatous goitre, and adenomatous or cystic goitre. Class 2. Diseases lowering or abolishing the secretary function of the gland, such as cretinism and myxoedema. Class 3. Diseases increasing and possibly preverting the secretory function as exophthalmic goitre, and those cases of goitre with tachycardia. Simple enlargement of the gland is often physiological and occurs in response to some temporary stimulus or demand for an increased functional activity. But in many cases it goes on increasing and becomes pathological. It is a simple hypertrophy, analogous to that of the mammary gland which takes place during pregnancy and lactation. The treatment consists in supplying the increased amount of thyroid secretion required from another source. When this is done the gland gradually diminishes in size. As a rule a unilateral goitre is due to an adenoma or cyst in one lobe, the size of which would not be affected by thyroid powder is usually a sufficient dose. If goitre is prevalent in the district, the patient should drink only boiled or distilled water. Myxoedenma results from a partial fibrosis of the gland, and occurs in women between forty and fifty years of age. The early symptoms are often mistaken for those the menopause. There is a gradual loss of mental and physical energy, with defective memory, and slight visual hallucinations. Cold is often complained of. The face becomes rounder and fuller, and there is slight swelling of the eyelids. The skin is dry and smooth, and a fine desquamation takes place. Care-

ful examination of the neck may show that the thyroid gland is diminished in size. When the ovaries atrophy at the same time, the symptoms of the menopause—flushes, sweats, etc.—may be superadded. Certain forms of lipomatosis closely resemble mild forms of myxoedema, but thyroid extract has no effect upon the swellings. Exophthalmic goitre is due to excessive secretion of the gland, the goitre, exophthalmos, tachycardia, tremor, and sweating making up a readily recognizable clinical picture. The only tenable explanation of the exophthalmos is an abundant development of the retrobulbar fat in the orbit. Where the exophthalmos is absent, there may be a staring expression and an abundance of winking. The tachycardia is the most constant symptom, and many cases are described as paraxysmal tachycardia. This should only be done if it is the only symptom present, and the gland is not enlarged. The enlargement of the gland is usually not great. The mental condition is very important, it being characterized by irritable weakness and disproportionate fatigue. The finer tremor of the hand is usually present. The secondary variety of Graves's disease is that which supervenes in a goitre of long standing. Excessive and long continued use of thyroid extract may produce many of the symptoms of exophthalmic goitre. —New York Medical Journal.

THE MAN IN THE MOON

A five-year-old boy with his hands thrust deep in his pockets, stood on the front porch, watching the full moon rise. "Mama he ventured thoughtfully, "I know why there is a man in the moon."

"Why, son?" asked the mother listlessly.

"Why there had to be some one up there to put out the lights when daytime came, and God knew it would take a man to do it."—Circle Magazine.

HEARD IN THE DIVORCE COURT

"Your Honor, I don't think I should be oblighed to live with this woman any longer," said the dispirited and dyspeptic little man who was the plaintiff in the case. "Her cooking is something dreadful, biscuits like clods and her coffee is mud! Why to every cupful there is a half a cup of grounds."

But the Judge's ruling was that half a cupful was insufficient grounds for divorce.—Lippincott's.

POOR MEMORY.

A physician in a small town was distinguished for his inability to remember names and people. One day, while making out a patient's receipt, his visitor's name escaped him. Not wishing to appear so forgetful, and thinking to get a clew, he asked her whether she spelled her name with an e or an i. The lady smilingly replied, "Why, doctor, my name is Hill."—Exchange.

THE STAR BOARDER'S REFLECTION

Landlady: Mr. Star, now that we are seated about the board to partake of our Christmas turkey, does it not occur to you that there were only two turkeys on the ark with Noah

Mr. Star: Indeed, it is forcibly brought to mind. I sincerely hope that this one is the last of the two.—Circle Magazine.

NOT WHOLLY LACKING

Little Harry who was spending a summer in the mountains, stood one day caressing a Scotch collie. The young man who owned the dog, seeing thet boy's admiration for the collie asked:

"Have you any animals at home, Harry?"

At this the little lad replied, after pondering a moment:

"Yes, we have flies."—The Delineator.

AN INCUMBRANCE

Little Helen had been noisy all day long. Her papa asked her to stand in the corner to punish her.

After crying a while she very indignantly said, I do wish papa had never married in this family."—The Delineator.

OUT OF ORDER.

Former Representative Henry U. Johnson of Indiana was engaged in debate with an Illinois Congressman, and called him an ass. This was unparliamentary, and, of course, had to be withdrawn. Pursuant to the order of the Speaker, Mr. Johnson said:

"I withdraw the language I used, Mr. Speaker, but I insist that the gentleman from Illinois is out of order."

"How am I out of order?" demanded the Illinois man, with considerable heat.

"Probably a veterinary surgeon can tell you," retorted Johnson. This was parliamentary and went into the Record.—Indinapolis News.

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